



FLIGHT



First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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EDITORIAL COMMENT.

"Always Too Late!" On Monday, in the House of Commons, the Minister of Munitions had some very hard truths to tell, and characteristically he told them with little mincing of words. As a whole, the masterly speech made by Mr. Lloyd George left grounds for the greatest satisfaction to this country and its allies, although there were undoubtedly some ugly-looking flies in the ointment. Whether the laying bare of the state of affairs will have the desired effect of bringing the offenders against the interests of the Empire to a sane state of mind remains to be seen. The indictment against the ghastly pestilence of Trade Union methods, and the natural resignation to things as they are which those methods bring to certain of the employers, was so strong that, if nothing which has gone before has brought it home to the world that such methods, when national calamity has arisen, as at the present moment, are a menace not only to the British Empire, but to the whole world's well-being, surely the Munitions Minister's words of warning will open the eyes of the community at large. That any body of men, either under the cloak of their unions or the reverse, with one spark of decency in their organism, let alone a sense of patriotism, should avail themselves of some hard and fast rule at such times as

these, to curtail the possible output of the necessary material to bring the present horrible conflict to a more speedy and victorious conclusion, is beyond the power of belief in ordinary man. Especially when those rules have been the result of power obtained by the most contemptible political prostitution that has been seen since the foundation of the British Parliament, and obtained in times of Peace, when a general feeling of tolerance has made it possible for such unholy compacts to be made. Yet the fact remains that, by reason of some outrageous regulation, whereby non-unionists and unskilled men and women are debarred from working side by side with those who say they will not be coerced, and in the same breath insist upon the right to coerce non-unionists into their own way of thinking, the whole country's future may be placed in serious jeopardy. We wonder what these gentry would think were it possible for them to look into a picture which would give them as taskmasters those murderous Huns, whom at the present moment they, as British subjects, are, by their short-sighted action, helping to encourage to further efforts, if not actually assisting them, to ultimately win the War. They would probably be the first to cower down and say, "Please it wasn't me, sir." Fortunately for the world, these degenerates are in the vast minority, and therefore it is but a matter of time for their obstinacy to be combatted. But the pity of it, that such combatting should be necessary with such a cause to assist as the crushing of the mad venomous brute which is running amuck in the European quarter of the globe. Let us hope the small section of obstructionists will be submerged before it is too late once more. So many "might have beens" have gone by the board in the past, since Germany first violated Belgium, in every case by reason of our being "too late," that there should be no more latitude given to those who still insist upon their traitorous methods. Their loyal fellow workmen should, and probably will ere long, arise in their wrath and inflict, figuratively speaking, annihilation upon them, so that the necessary munitions demanded by the legions fighting in the trenches may reach them before that is "too late." It was a very emphatic tale in this connection that Mr. Lloyd George hammered in on Monday, and it is urgent that an end of such a story should be made without delay. It is a cause for gratification that outside the immoral influence which certain of the Unions of allied trades have forced upon the Aeronautical Industry, all those who were in the Industry at the commencement of the war, and all those firms who have since joined its ranks, have succeeded in putting forward such

glorious efforts in their desire to help the cause of the civilised world, that no portion of the censure which was made in Parliament can apply to the constructors associated with this great science and arm of His Majesty's forces. And this will stand to their credit for all time, when the great Aeronautical Industry, which has now but made a tiny start, has established itself as one of the greatest and far-reaching organisations the world has known.

To obtain a slight idea of what it would mean if the same spirit had prevailed through every strata of labour energy, in every other trade concerned with the output of war materials, it is but necessary to read some of the incisive passages in Mr. Lloyd George's appeal in Parliament. Just glance at his remarks which followed his denial of the truth of the rumours which he said prevailed of their already being over-productive.

"Nothing could be more malevolent," he said, "nothing could be more mischievous. You can talk about over-ordering when we have got as much as the Germans have; and even then I should not like to argue how far we should go. So mischievous is that kind of talk that I cannot help thinking it must have been originated by men of pro-German sympathies, who know how important it is that our troops should at the critical moment not be short of that overwhelming mass of material which alone can break down the resistance of a highly-entrenched foe. We have never yet, in spite of great efforts, approached the German or the French production. We have got to reach that first, but not last. . . ."

"The most fatuous way of economising is to produce an inadequate supply. £200,000,000 will produce an enormous quantity of ammunition. It is 40 days' cost of the war. If you have it at the crucial moment your war might be won with your 40 days. If you have not got it, it might run to 400 days. What sort of economy is that?"

"It is not merely that. What you spare in money you spill in blood. I have a very remarkable photograph—I don't think I ought to say where I got it from—of the battlefield of Loos, taken immediately after. There was barbed wire which had not been destroyed. There was one machine-gun emplacement which was intact—only one; the others had been destroyed. There, in front of the barbed wire, lay hundreds of gallant men. One machine-gun! These are the accidents that you can obviate if you have enough. How? Every soldier tells me there is but one way of doing it. Have enough ammunition to crush every trench where an enemy lurks, to destroy every concrete emplacement, to shatter every machine-gun, to rend and tear every yard of barbed wire, so that if the enemy wants to resist he will have to do it in the open, face to face with better men than himself. That is the secret—plenty of ammunition.

By these arguments the Munitions Minister pleaded to workmen, to capitalists and taxpayers alike to disabuse their minds of the idea that more and still more munitions were not required. Then, passing on to the question of remedy, he continued:—

"The right part of economy is not to reduce the output, but to reduce the cost; and labour alone can help us here. There are only eight per cent. of the machines for turning out lathes in this country working on night shifts. We have appealed to the employers. They say 'We have not got the labour,' and it is true. They have not got skilled labour. But there are many of these operations which could be discharged effectively enough by unskilled men and by women. We have done everything to supply skilled labour. . . . But we have got nothing like what we want. It all depends upon organised labour. Unless they allow us to place unskilled men and women at work which hitherto perhaps has been the monopoly of skilled men, in order that we may take the highly skilled men away and put them into other work, we cannot do what we want. You may ask why it has not been done, and I will tell the House why, frankly. We found exactly the same difficulties as we found in the release of men from the Colours. There is an action to be fought in every area, every workshop, every lodge.

"The weakness is this. Our bargain was that we should restrict the profits of the employer to a certain extent, and the fact that we have kept our bargain has been against us. A few employers have done their very best to do what is called diluting labour, and they have been met with unquestionable resistance. It has taken us

weeks to overcome this resistance. The rest of the employers know this, and say, 'At any rate we have no personal interest in the matter. If we increase the output by means of night shifts it does not increase our profits.' The personal interest has been completely eliminated, and when men are working hard superintending their work and suffering from overstrain they really do not feel like embarking in a conflict with their own men in order to increase the output, which so far as their works are concerned makes no difference."

"There is only one appeal to employer and employed; it is the appeal to patriotism. The employer must take steps, though he is loth to do it. They must really face the local trade unions, and put forward the demand, because until they do so the State cannot come in. (An hon. member: 'Martial law.') We have had an Act of Parliament, but the law must be put into operation by somebody, and unless the employer begins by putting on unskilled men and women to the lathes we cannot enforce that Act of Parliament. The first step, therefore, is that the employer must challenge a decision upon the matter, and he is not doing so because of the trouble which a few other firms have had. But let us do it. Victory depends upon it. Hundreds of thousands of precious lives depend upon it. It is a question of whether you are going to bring this war to an end in a year victoriously, or whether it is going to linger on in bloodstained paths for years. Labour has got the answer. The conflict was entered into with Labour; we are carrying it out. It can be done.

"I wonder whether it will not be too late. Ah, fatal words on this occasion! Too late in moving here, too late in arriving there, too late in coming to this decision, too late in starting with enterprises, too late in preparing! In this war the footsteps of the Allied Forces have been dogged by the mocking spectre of 'too late,' and unless we quicken our movements damnation will fall on the sacred cause for which so much gallant blood has flowed, and I beg employers and workmen not to have 'too late' inscribed upon the portals of their workshops, at any rate, and that is my appeal.

"Everything depends upon it, everything in the next few months of the war. . . . The chances of victory are still with us. We have thrown away many chances. But for the most part the best still remain. In this war the elements that make for success in a short war were with our enemies; all the advantages that make for victory in a long war were ours—and they still are. Better preparation before the war, interior lines, unity of command—those belonged to the enemy. More than that, undoubtedly he has shown greater readiness to learn the lessons of the war and to adapt himself to them. He had a better conception at first of what war really meant. . . ."

"It is now the moment for putting the whole of our energies at home into preparing for the blow to be struck abroad. Our Fleet and the gallantry of the troops of the Allies have given us time to muster our reserves. Let us utilise that time without the loss of a moment. Let us cast aside the fond illusion that you can win victory by an elaborate pretence that you are doing so. Let us fling to one side rivalries, trade jealousies, professional, political, everything. Let us be one people. One in aim, one in action, one in resolution, so to win the most sacred cause ever entrusted to a great nation."

Let the warning in the above words go straight home to every true Briton—master and mar alike. Let there be no hesitancy, no holding back, but with one accord let one and all give of their best and help to inflict such disaster upon our murderous enemies as shall for at least the next ten generations leave them impotent to force their beastliness and horrors upon the rest of the world.

Then, if it be necessary, and not till then, can the British peoples turn their attention, master and man, to the settlement of our domestic affairs, and may the war have so enlightened the individual units of the Empire with such effect that a wider and more generous spirit shall prevail between all sections and classes of the community. The trench fighting and the unprecedented changes which the world's upheaval have brought about may easily be reflected in the nation's relationship one to another in the years following peace, and it is with thoughts of such possibilities that we wish to all and sundry the goodwill which Christmas is supposed to bring in its wake.

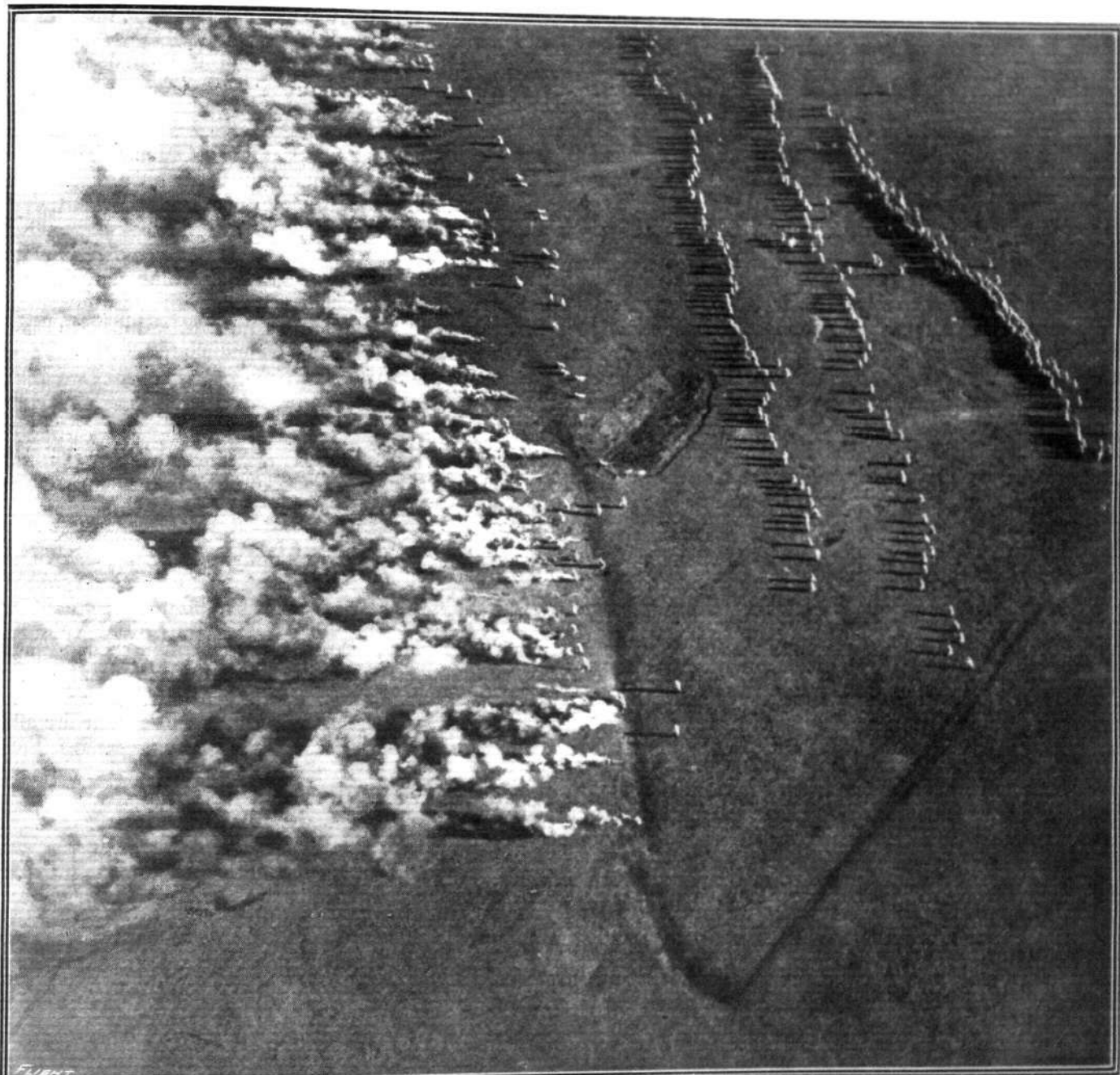
HUN GAS ATTACKS AND AEROPLANES.

A propos of the unique picture below, some particulars are now to hand regarding the gas attack on the British lines north-east of Ypres, in the small hours of Sunday morning, when, as the correspondent suggests, the troops would naturally be at the lowest ebb of their capacity for resistance. Reuter's correspondent at the British Headquarters, describing the attack, says:—

"There came a lull as morning broadened, clear and blue and frosty. Then a large squadron of aeroplanes belonging to the second wing went sweeping in humming procession over the enemy lines, while at regular intervals along the undulating front, to where it melted into violet distance, great sausage-shaped observa-

tion balloons soared slowly till they had trailed out the full tether of their leashes.

"It was indeed an ideal day for airmen, a view which the enemy manifestly shared, for while the elusive shapes of the British machines were vanishing into the pale gold of the sky above the sunrise a fleet of enemy aircraft danced upwards like a flight of gauze midges, and very soon the zenith became dotted with hovering balls of woolly vapour. It was as pretty a spectacular aerial battle as could be conceived, although impossible to follow in detail. I learn that our machines delivered twenty-six distinct attacks, of which seventeen are claimed to have been successful. Three enemy aeroplanes were brought to earth behind the German lines, one of them swooping down in flames. Although several of our machines were winged, the entire fleet returned, and no casualties occurred amongst their gallant occupants."



THE EYES OF THE FORCES.—The above remarkable photograph shows, as no other method could, the means by which the Germans utilise the poisonous gas which they were the first to adopt in warfare. It was taken by a Russian pilot flying over the German lines at the moment when the attack was launched. On the left of the picture the deadly clouds are seen rolling on the wind towards the Russian forces, while on the right are German troops, seen as small grey dots with the long shadows of early morning thrown in front of them, waiting to follow up and complete the work of the poison. In the case illustrated by this photograph the gas has been released from cylinders worked by the men seen as tiny specks behind the fumes. The gas comes out from the nozzle of the cylinder under considerable pressure in a dense jet, which then spreads, one jet coalescing with another till a regular wall of the deadly compound sweeps over and down into the trenches, and sufficiently high above them to prevent the victims escaping.

AIRCRAFT WORK AT THE FRONT.

OFFICIAL INFORMATION.

British.

General Headquarters, Dec. 15th.

"OUR aeroplanes raided Hervilly aerodrome successfully.

"There have been ten combats in the air, in the course of which an enemy battleplane was driven down by one of our reconnaissance machines. One of our machines was forced down within our lines."

General Headquarters, Dec. 16th.

"The report in the German wireless of the 15th that we lost four aeroplanes is untrue."

General Headquarters, Dec. 18th.

"Yesterday afternoon a French torpedo-boat brought down a German waterplane off Nieuport, taking its occupants prisoners."

General Headquarters, Dec. 19th.

"An enemy aeroplane was brought down by our fire to-day east of Armentières."

General Headquarter, Dec. 20th.

"There was yesterday considerable activity on the part of the enemy's aeroplanes, which attempted to prevent our reconnaissance machines carrying out their work. These attempts were unsuccessful.

"During the day there were forty-four combats in the air. Two of the enemy's aeroplanes were brought down behind their lines and others were driven down apparently in a damaged condition. One of our machines is missing."

French.

Paris, Dec. 15th. Afternoon.

"Besides the aerial bombardments reported yesterday, our aeroplanes in the course of the 14th made numerous flights in pursuit of enemy craft. One of our machines attacked an enemy aeroplane over Schlestadt, Alsace. The enemy aeroplane took to flight.

"Two others in Artois engaged three Albatros aeroplanes in the enemy's lines. One of the Albatroses had to come down.

"Finally, one of our flotillas, in co-operation with British aeroplanes, bombarded the aviation ground of the Germans at Hervilly (Somme)."

Paris, Dec. 15th. Evening.

"In the region of St. Mihiel our special guns fired on enemy aircraft. One of these, hit by our projectiles, was forced to come down in the German lines.

"Our aviators have continued to display activity. A group of thirteen French aviators bombarded the German aviation camp at Hibsheim, east of Mulhouse. Shells of 155, 90 and 120 millimetres dropped on the hangars and struck their objective. Of the fifteen enemy aircraft which were on the ground at the moment of the bombardment five only went up and attempted without any result to drive off our air flotilla."

Paris, Dec. 17th. Evening.

"Two of our bombarding aircraft dropped some twenty shells of heavy calibre on the Sablons Station at Metz on the night of the 16th."

Paris (Ministry of Marine) Dec. 18th.

"A French torpedo-boat pursued and shelled two enemy waterplanes which were resting near the Outratel

Bank. One of the waterplanes succeeded in flying away, but the other was hit and brought down, its occupants, a naval officer and a non-commissioned naval officer, being captured."

Paris, Dec. 19th. Afternoon.

"A squadron of four aeroplanes carried out on the night of the 17th-18th inst., fresh bombardment operations over the station of Metz-Sablons. Some forty bombs were dropped over the station and the adjoining buildings."

Paris, Dec. 19th. Evening.

"Enemy aeroplanes this morning flew over the region of Poperinghe and threw 10 bombs. A woman was killed, and another woman and two children were wounded.

"During the night of the 18th, one of our aeroplane squadrons, composed of seven bombarding machines, dropped on the railway station of Metz-Sablons 31 90mm. and two 155mm. bombs. One of the machines which met with engine trouble safely descended in our lines near Dieulonard, to the south of Pont-à-Mousson."

Paris, Dec. 20th. Evening.

"This morning four of our bombarding aeroplanes, escorted by seven machines armed with machine-guns, dropped upon the goods station at Mulhausen six 155-millimetre and twenty 90-millimetre bombs. All the bombs struck their objective."

Russian.

Petrograd, Dec. 15th.

"Near Uexküll (south-east of Riga) an enemy aeroplane dropped bombs."

Italian.

Rome, Dec. 15th.

"A squadron of our aviators carried out yesterday an incursion over the Chiapovano and Idria Valleys, dropping bombs and darts on the enemy's encampments and huts at Chiapovano and Slaa.

"Our intrepid aviators subsequently, flying low, under the intense fire of the enemy's anti-aircraft batteries, turned their quick-firing guns on to the enemy's encampments, creating the utmost imaginable panic among the troops there assembled."

Rome, Dec. 16th.

"A hostile airman dropped some bombs on Strigno and Grigno, in the Val Sugana. The damage done was slight."

Rome, Dec. 18th.

"An enemy aeroplane dropped five bombs on Carro di Sopra, in the Ledro Valley, but without doing any damage.

German.

Berlin, Dec. 15th.

"An English steamer which ran ashore on December 12th off La Canne was attacked yesterday by our aviators with visible success.

"The enemy, who had dispatched several aeroplane squadrons to Bapaume-Peronne, Lothring, and Mullheim, in Baden, lost in aerial engagements and under the fire of our anti-aircraft guns four aeroplanes, including one high-power aeroplane with two motors."

Berlin, Dec. 16th.

"Lieut. Immelmann, flying over Valenciennes yesterday, shot down an English monoplane. This makes the seventh enemy aeroplane which he has shot down.

"The enemy aerial attack on Mulheim (Baden) the day before yesterday was, according to the French report, directed against the railway, but not a single bomb was dropped near the railway. In the town itself one civilian was killed and another wounded. The military damage done was restricted to the destruction of one pane of glass in a hospital window.

"East of Lutsk a Russian aeroplane was forced to descend within reach of the Austro-Hungarian troops."

Berlin, Dec. 18th.

"An enemy aeroplane attack was delivered against

Metz, during which the municipal museum was seriously damaged. Otherwise no damage was done."

Berlin, Dec. 19th.

"During the night Metz was again attacked by enemy aviators. Damage to property was the only result of the attack."

Berlin, Dec. 20th.

"One of our air squadrons attacked Poperinghe, where numerous enemy communication lines converge. A British biplane was shot down near Bruges in an air battle; the crew was killed."

Turkish.

Constantinople, Dec. 17th.

"Yesterday our artillery shot down an enemy aeroplane."

THE BRITISH AIR SERVICES.

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

THE following appeared among the Admiralty announcements of the 16th inst. :—

Capt. G. M. Paine, C.B., M.V.O., granted the rank of Commodore, First Class, with seniority of Dec. 10th.

Temporary Lieut. (R.N.V.R.) E. V. Sassoon entered as Acting Flight-Lieutenant, with seniority of Dec. 13th, and appointed to "President," additional, for R.N.A.S.

Temporary Warrant Officer (Second Grade) C. A. Schurr promoted to Temporary Lieutenant (R.N.V.R.) with seniority of Dec. 15th, and appointed to "President," additional.

G. E. Spital and M. R. Kingsford both entered as Probationary Flight Sub-Lieutenants for temporary service, with seniority of Dec. 15th, and appointed to "President," additional, for R.N.A.S.

M. O. F. England granted a temporary commission as Sub-Lieutenant (R.N.V.R.), with seniority of Dec. 15th, and appointed to "President," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of the 17th inst. :—

Flight Sub-Lieut. H. H. Square promoted to Flight-Lieutenant, with seniority of Aug. 17th.

The undermentioned have been granted temporary commissions as Sub-Lieutenants (R.N.V.R.), and appointed to "President," additional, for R.N.A.S., all to date Dec. 16th: A. W. C. Holcombe, J. L. Kerry, A. Sandell, D. C. Evans, H. J. Roach, F. E. Fraser, S. Hampton, and R. S. Thacker.

The following have been entered as Probationary Flight Sub-Lieutenants, for temporary service, and appointed to "President," additional, for R.N.A.S., to date as stated: A. I. Hutton, J. D. Scott, H. R. Wambolt, G. E. Duke, C. E. Moore, B. R. Padmore, J. H. Keens, Major Benson Walker, C. B. Sproatt, T. R. Liddle, F. C. Armstrong, F. G. Hellmuth, and R. F. Redpath; Dec. 1st. R. H. Collett; Dec. 16th. A. W. C. Kidner and N. H. McDiarmid; Nov. 22nd.

The following appeared in the *London Gazette* of the 17th inst. :—
J. MacD. Scott granted commission as Engineer Lieutenant, for temporary service. Dec. 14th.

The following appeared among the Admiralty announcements of the 18th inst. :—

Lieut. G. L. Davidson, D.S.C., to "President," additional, for R.N.A.S. To date Dec. 17th.

Chief Petty Officer H. M. Northcott, granted temporary commission as Lieutenant (R.N.V.R.), with seniority of Dec. 12th, and appointed to "President," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of the 20th inst. :—

Acting Sub-Lieut. A. L. White, to the "President," additional, for R.N.A.S. To date Dec. 23rd.

The following have been granted temporary commissions as Sub-Lieutenants (R.N.V.R.), all with seniority Dec. 19th, and appointed to the "President," additional, for R.N.A.S., to date

Dec. 20th: A. T. Barker, L. V. Pearkes, C. N. Downes, W. M. Miller, and J. Hodson.

Royal Flying Corps (Military Wing).

THE following appeared in a supplement to the *London Gazette* published on the 15th inst. :—

Flying Officers.—Nov. 30th, 1915: Temporary Capt. J. D. Waddell, Welsh Regt. (T.F.); Lieut. W. A. C. Heyman, 4th (Queen's Own) Hussars, and to be seconded; Lieut. G. F. Bone, Royal Engineers (T.F.); Lieut. T. Jones, Canadian A.S.C.; Second Lieut. L. A. Newbold, Essex Regt., and to be seconded. Dec. 4th, 1915: Capt. G. Henderson, 38th King George's Own Central India Horse, Indian Army; Lieut. C. B. Wilson, Reserve of Officers; Temporary Second Lieut. J. R. Philpott, Suffolk Regt., and to be transferred to the General List; Second Lieut. D. Brooks, Special Reserve.

Supplementary to Regular Corps.—To be Second Lieutenants (on probation): Barton Mott; Oct. 22nd, 1915. Dec. 13th, 1915: Charles T. H. Vaisey, William O. Phillips, Robert D. Clinch, Bernard J. Nicholson, Leonard I. T. Hewer, Francis H. Humphreys, Henry M. B. Law, Alfred J. Hamar, Aubrey C. Hatfield, Eric B. Macmanus, Hugh P. Tempest, Godfrey Wigglesworth, Austin C. Ferguson, Joseph C. Griffiths, Rowland M. W. Browne, Godfrey L. Bond.

Second Lieut. (on probation) Douglas Brooks is confirmed in his rank.

The following appeared in a supplement to the *London Gazette* issued on the 16th inst. :—

Squadron-Commanders (and to be Temporary Majors whilst so employed).—Capt. R. Orme, Special Reserve, from an Equipment Officer; Nov. 29th, 1915. Capt. T. O'B. Hubbard, Special Reserve, from a Flight-Commander; Dec. 7th, 1915.

The following appeared in the *London Gazette* of the 17th inst. :—

Supplementary to Regular Corps.—Second Lieut. (on probation) F. H. Songhurst confirmed in rank. F. C. Buck to be Second Lieutenant (on probation). Dec. 1st.

The following appeared in a supplement to the *London Gazette* issued on the 18th inst. :—

Flying Officer.—Second Lieut. J. C. Turner, R.A., and to be seconded. Aug. 24th, 1915.

The following appeared in a supplement to the *London Gazette* issued on the 20th inst. :—

Temporary appointments made at the War Office.

Deputy Director at War Office.—Brevet Lieut.-Col. D. S. MacInnes, D.S.O., R.E., from an Assistant Director, and to be Temporary Colonel whilst so employed, vice Brevet Lieut.-Col. W. S. Brancker, R.A. Oct. 31st.

Assistant Directors.—Major (Temporary Lieut.-Col.) J. D. B. Fulton, C.B., R.A. (since deceased), from Chief Inspector, Aeronautical Inspection Department, and retain temporary rank whilst so employed, vice Temporary Col. D. S. MacInnes, D.S.O. Oct. 31st. Brevet Major (Temporary Lieut.-Col.) W. D. Beatty, R.E., from Chief Inspector, Aeronautical Inspection Department, and retain temporary rank whilst so employed, vice Major (Temporary Lieut.-Col.) J. D. B. Fulton, C.B. (since deceased). Nov. 13th.

Deputy Assistant Director.—Capt. E. R. L. Corballis, Royal Dublin Fusiliers, a Flight-Commander, Royal Flying Corps, vice Capt. G. M. Griffith, R.A. Oct. 31st.

Establishment.

Flying Officers.—Dec. 1st: Temporary Lieut. V. Busby, Motor Cyclist Section, R.E., S.R.; Second Lieut. C. E. H. James, Welsh, and seconded; Temporary Second Lieut. J. R. Allan, General List; Second Lieut. N. G. McNaughton, S.R.; Second Lieut. D. Joy, S.R.; Second Lieut. R. F. S. Morton, S.R.

Aeronautical Inspection Department: Chief Inspectors.—Brevet Major W. D. Beatty, R.E., from D.A.Q.M.G., and to be Temporary Lieutenant-Colonel whilst so employed, vice Major (Temporary Lieut.-Col.) J. B. D. Fulton, C.B. (since deceased), Oct. 31st. Capt. R. K. Bagnall-Wild, Reserve of Officers, from Inspector of Engines, and to be Temporary Lieutenant-Colonel whilst so employed, vice Brevet Major (Temporary Lieut.-Col.) W. D. Beatty. Nov. 13th.

Supplementary to Regular Corps.—Second Lieutenants (on pro-

✕ ✕

The Roll of Honour.

THE Secretary of the Admiralty has announced the following casualties:—

Under date December 17th:

Injured.

Flight Sub Lieutenant Herbert G. Blackley, R.N.
Sub-Lieutenant Herbert G. P. Rees, R.N.V.R.

Undated:

Died of Wounds.

M. McWhinney, R.M.A., Anti-Aircraft Brigade.

Wounded.

E. P. Banbury, R.M.A., Anti-Aircraft Brigade.

The following casualties in the Expeditionary Force have been reported from General Headquarters:—

Under date December 9th:

Missing.

1st Class Air-Mechanic W. H. Cox and 1st Class Air-Mechanic H. J. Kirkbride, R.F.C.

Under date December 14th:

Wounded.

Second Lieutenant A. D. Bell-Irving, 3rd Gordon Highlanders and R.F.C.
Captain Hon. O. M. Guest, Lothians and Border Horse and R.F.C.

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London's Anti-Aircraft Defences.

THE following communiqué was issued by the War Office on the 15th inst.:—

"The statement made in some newspapers yesterday to the effect that the War Office has decided not to take over the naval personnel at present employed in manning the anti-aircraft guns in London is unauthorised and inaccurate.

"No such decision has been made. Both Services are working in the closest co-operation to the same end, viz., the defence of the Capital, and the large additions to the various measures of defence contemplated render it most improbable that the Army Council would be able to dispense with the services of the Royal Navy Anti-Aircraft Corps, which the Admiralty has offered to place at their disposal."

We are glad to see from the above communication that there is no intention to jettison the organisation, which has been set up at considerable cost, and as the result of hard work. As we surmised last week, the report to the contrary which had obtained currency was obviously an outrage upon common sense, and it is a sound procedure for so prompt a contradiction to be issued officially. We may still hope to hear that Sir Percy Scott's gunnery experience has been also attached to the new condition of affairs.

In the House of Commons on the 15th inst., Mr. Macnamara, answering Mr. King, said it had been

bation) confirmed in rank: N. G. McNaughton, D. Joy, R. F. S. Morton, G. McKerrrow. To be Second Lieutenants (on probation): C. T. Inman; Nov. 15th. J. Brown; Nov. 30th.

Royal Flying Corps (Territorial Force).

THE following appeared in a supplement to the *London Gazette* issued on the 16th inst.:—

Hampshire Aircraft Parks, R.F.C.—Second Lieut. (Temporary Capt.) Alfred R. Martin, from East Kent Regt. (Provisional Batt.), to be Captain (temporary) and to be Adjutant. Nov. 12th, 1915, instead of as previously notified.

The following appeared in a supplement to the *London Gazette* issued on the 18th inst.:—

Hampshire Aircraft Parks, R.F.C.—M. J. P. O'Gorman, C.B., to be Lieutenant-Colonel (temporary). Dec 19th.

✕ ✕

Under date December 15th:

Missing.

Second Lieutenant G. S. M. Insall, Royal Flying Corps.

Under date December 16th:

Missing.

Second Lieutenant A. V. Hobbs, Royal Flying Corps.
Second Lieutenant C. E. T. Tudor-Jones, East Lancashire, attached R.F.C.

Undated:

Killed.

Second Lieutenant C. H. Kelway-Bamber, Royal Flying Corps.

Previously reported Missing, now reported Killed.

Captain T. D. Adams, R.F.A., W. Lancs Brig. (T.F.), attached R.F.C.

Correction:

Missing.

Lieutenant C. C. Strong, London R. (T.F.), 13th Batt. (Princess Louise's Kensington), attached R.F.C.
Should read— Captain C. C. Strong.

The following casualty in the Canadian Contingent with the Expeditionary Force has been reported:—

Undated:

Previously Unofficially now Officially reported Prisoner of War.

Lieutenant D. Leeson, 7th Infantry (British Columbia Regt.), attached R.F.C.

✕ ✕

decided that the defence of London against hostile aircraft was to be taken over by the War Office. The transfer, it was anticipated, would take place shortly. As regarded Sir Percy Scott, who was at present in charge of the gunnery defences of London, the question of his continuing that work would be one for determination when the transfer took place. Pending the transfer, Sir Percy Scott remained in his present post.

Sir J. D. Rees asked the Under Secretary for War whether any decision had been arrived at with regard to Sir Percy Scott.

Mr. Tennant: I have already indicated that Sir P. Scott may not be available for this duty, but the matter is still under consideration.

In the House on Tuesday Mr. Tennant said that the London Anti-Aircraft Corps had not yet passed under the control of the War Office, and he presumed that Sir Percy Scott was still in charge.

An Award for an R.N.A.S. Officer.

It was announced on the 17th inst. that the King had been graciously pleased to give orders for the award of the Distinguished Service Cross to the under-mentioned officer in recognition of his services and signal gallantry in charge of machine guns in the Gallipoli Peninsula:—

Lieutenant THEODORE DOUGLAS HALLAM, R.N.V.R. (now Acting Flight-Lieutenant, R.N.).

THE CAPTURED ALBATROS FIGHTING BIPLANE.

HAVING been designed to carry a fairly heavy machine-gun and a considerable amount of ammunition, the captured fighting type Albatros that was exhibited on the Horse Guards' Parade is naturally of somewhat larger

pared with those of the majority of British machines—set at a comparatively great angle of incidence, are evidently capable of raising a great load even at low speeds. As the body construction is of a form not usually



Three-quarter front view of the captured Albatros biplane.

"Flight" Copyright

dimensions than was the two-seater Reconnaissance type of the same make described in our issue of November 26th.

Generally speaking, however, it does not differ greatly in detail construction from the smaller machine, the wing design and construction as well as the method of building up the *fuselage* without the use of cross-wiring being

seen in this country, a few words regarding it may be of interest. In addition to the four main *longerons* situated in the four corners of the rectangular section *fuselage*, there are two more, one half-way up on each side. As no wire bracing is employed, the attachment of struts and cross-members to the longitudinals becomes a

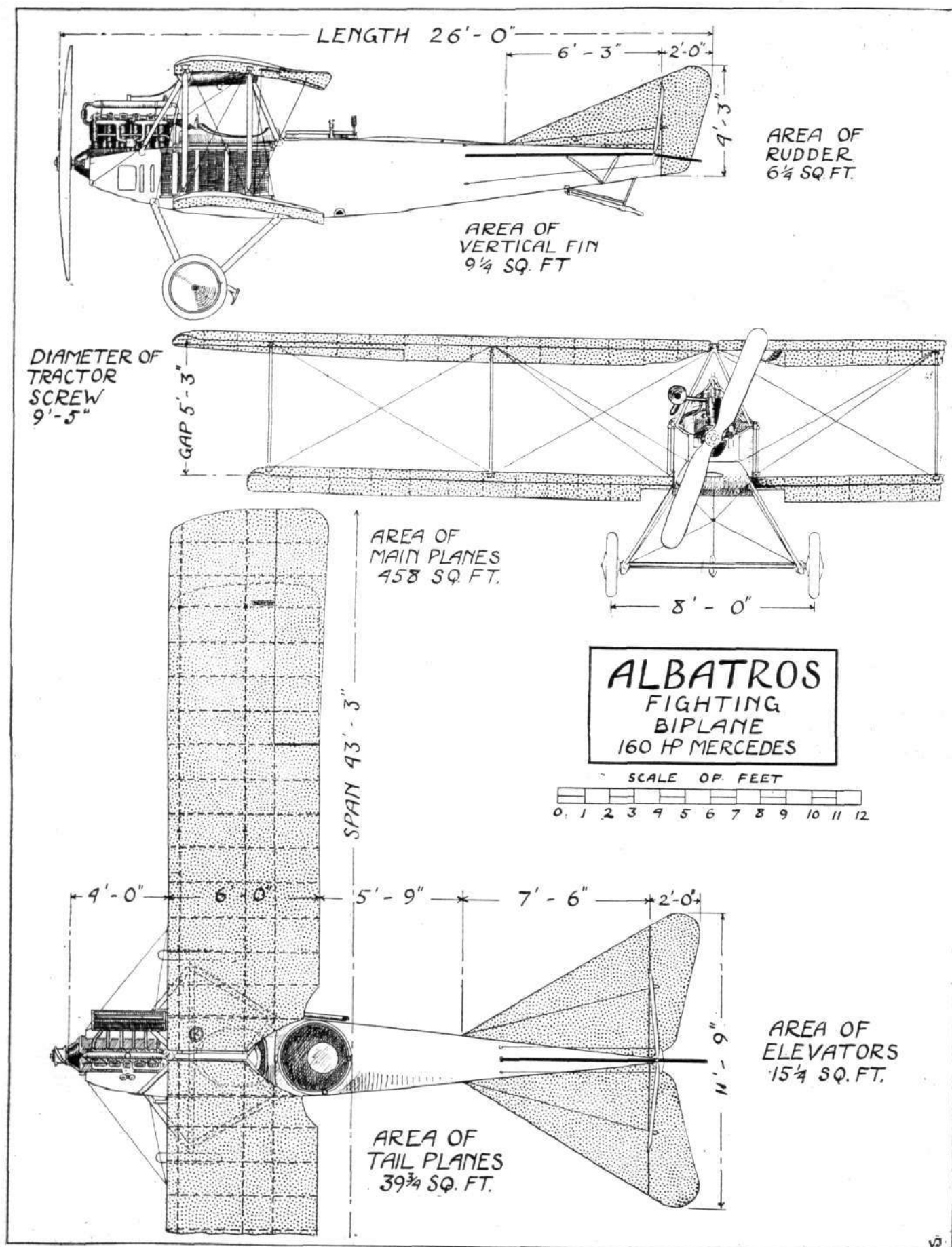


Three-quarter rear view of the Albatros fighting biplane.

"Flight" Copyright

practically identical in both cases. Being intended for fighting rather than for scouting purposes, climbing capacity has been aimed at rather than high speed in horizontal flight. The deeply cambered wings—as com-

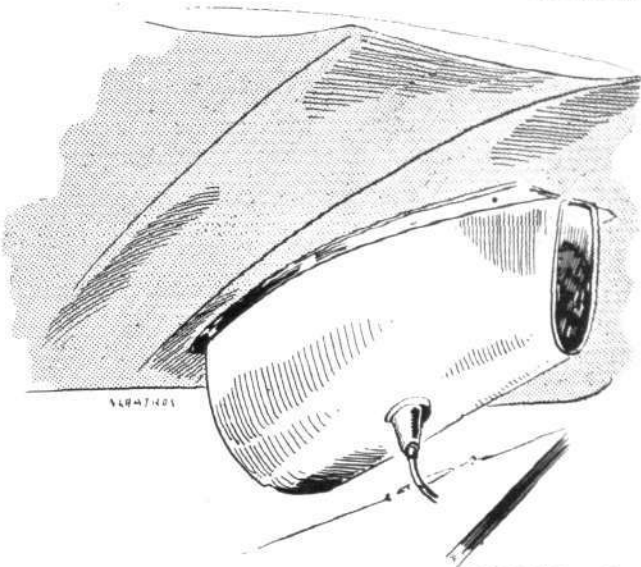
fairly simple matter. As far as it was possible to ascertain, this joint consists simply of a "knee" piece of hard wood resting on the two inner surfaces of the *longeron*, and secured by screws through the three-ply covering.



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THE CAPTURED ALBATROS FIGHTING BIPLANE.—Plan, front and side elevations to scale.

The struts and cross-members appeared to be simply abutting against this "knee," but were probably in reality mortised or dowelled. Where the middle longeron crossed the struts these were swelled out in the manner



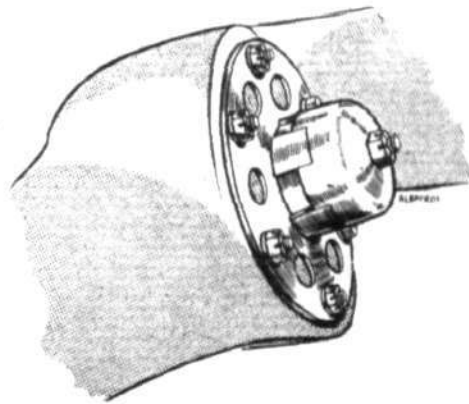
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The petrol service tank is mounted underneath the top plane in the Albatros fighting biplane,

shown in the sketch, and further strengthened by three-ply wood as illustrated.

As regards the strength of this method of construction, we were shown, at the time of the first visit by an

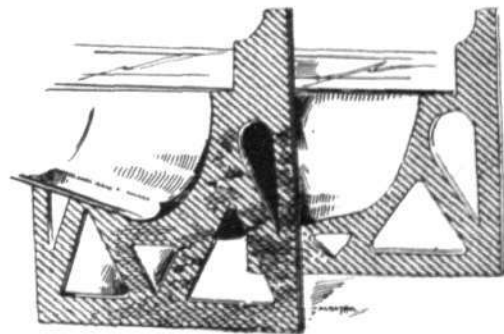
Albatros biplane to this country in 1914, a testimonial from the *Deutsche Versuchsanstalt für Luftfahrt* to the effect that this institute had examined and corrected the calculations made by the Albatros firm, and that the body of the Albatros biplane had a factor of safety of about 60. The *Versuchsanstalt* further stated that the bending resistance of a body of this type is 2.5 times greater than that of a cross-wired fuselage of the same outside dimensions, and having members of the size usually employed in the girder type of body. Compared weight for weight the *Versuchsanstalt* state that the Albatros firm are justified in claiming that the veneer type is the stronger of the two—by how much is not stated. Apart from the questions of strength and cost—although the latter should not count for a great deal at a time like the present—the Albatros form of construction might probably, at least so it appears to us, offer certain advantages for military machines in case of damage by shell fire. If one of the longitudinal members of a girder type body were hit by a bullet or fragment of shell and fractured the strength of the whole structure would be seriously impaired, since the component parts are so greatly interdependent one upon the other. The fracture of the corresponding member of an Albatros type of body would probably not be such a serious



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Sketch showing how propeller is locked on its shaft in the Albatros fighting biplane.

matter, since there would be a good deal of rigidity left in the three-ply covering. Experiments made with bodies of each type and of similar weight, purposely



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Two of the plywood engine bearers on the Albatros biplane.



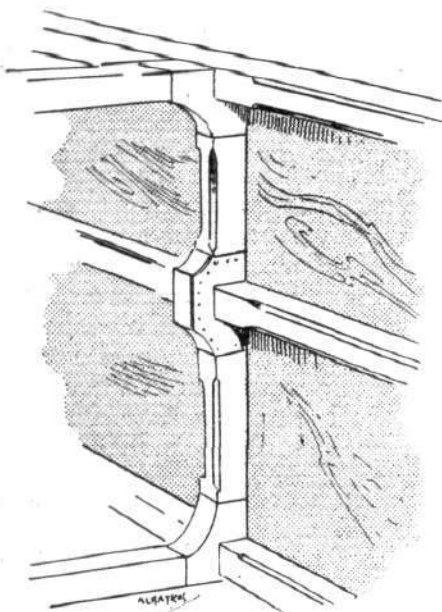
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Engine and chassis of the captured Albatros fighting biplane.

damaged and subsequently subjected to an equal amount of loading, should furnish some interesting data on this subject.

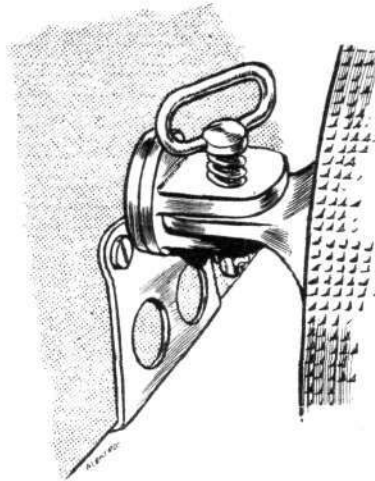
Apart from variations in dimensions and engine power, the fighting type Albatros biplane differs from the reconnaissance machine in that the pilot occupies the front seat, while the observer, or more correctly speaking the

seat of the piano-stool type is provided for the gunner, and allows him of turning about in an instant to take advantage of any favourable position that may present itself.



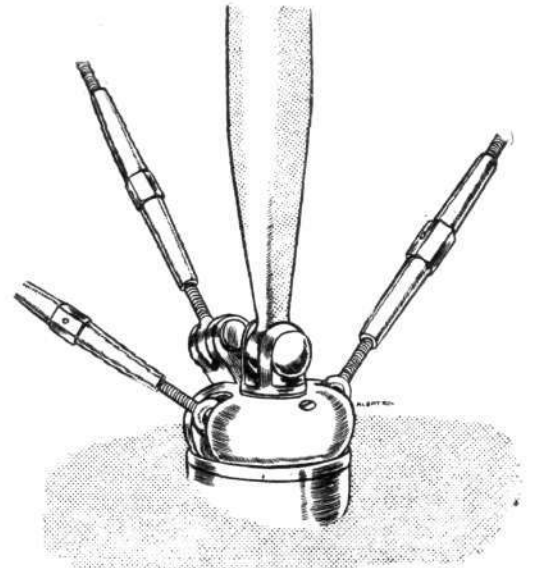
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Detail of Albatros fuselage construction.



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Attachment of lower plane to body of the Albatros fighting biplane.

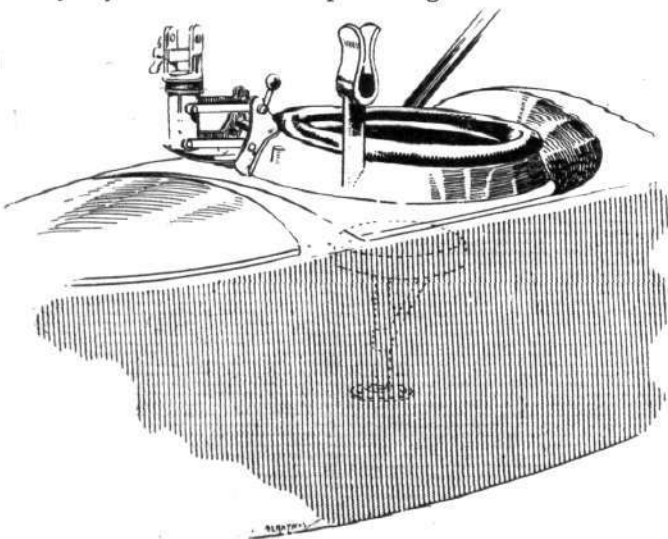


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Inter-plane strut joint on the Albatros fighting biplane.

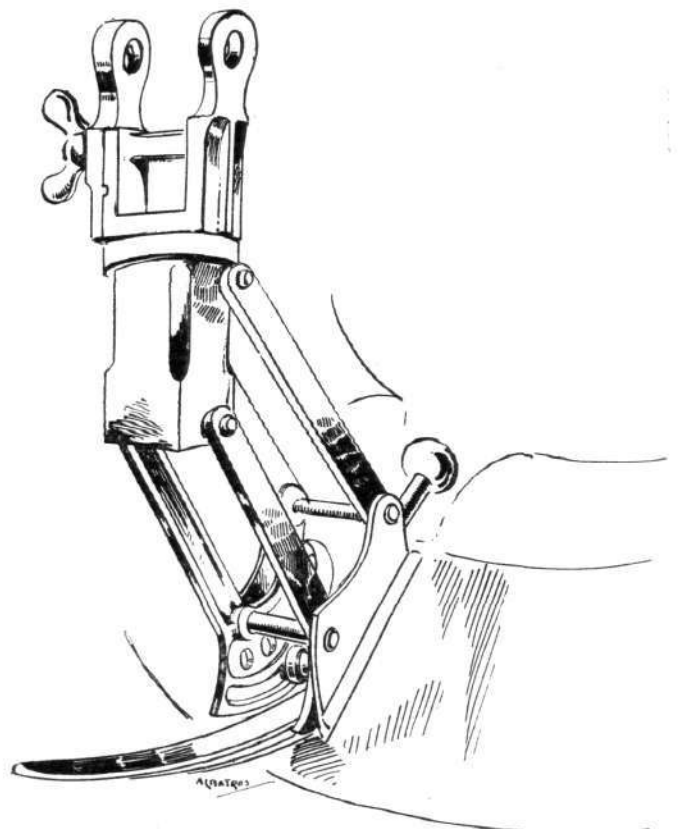
gunner, is installed in the rear cock pit, where he obtains a better view and is less restricted as regards the number of directions in which the machine-gun can be effectively operated. In order to facilitate gun-laying, the circular "rim" to the rear cockpit takes the form of a turntable, on one side of which is fitted an adjustable gun-mounting of the type shown in the accompanying sketches. By rotating the turntable the gun is trained approximately, in a transverse sense, on the object aimed at, while the final sighting—vertically as well as laterally—is made possible by the universal mounting of the gun on the turntable. In addition to the pivot provided for vertical sighting, the gun may be slightly raised or lowered bodily by means of the parallelogram shown in the

The front cockpit is fitted up in the usual way with all the instruments for navigation, &c., and with hand-



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Turntable and gun mounting on the Albatros fighting biplane.



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The swivelling mounting for the gun on the captured Albatros biplane.

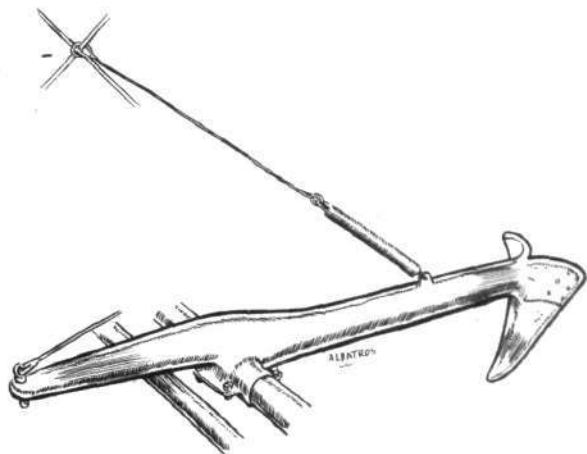
sketches, which is locked in any desired position by a short lever. When in its lowest position the weight of the gun is taken by a short laminated spring. A pivoted

wheel control for elevators and ailerons, and a pivoted foot bar for the rudder.

As regards the engine—a 160 h.p. Mercedes—this has

already been dealt with in a separate article, and there is, therefore, no need to go into details here. It will be sufficient to mention that it is mounted on two stout longitudinal members of pine, which are in turn supported in the nose of the machine by the front cross-member of the fuselage, and at equal distances of their length by transverse panels of approximately 1-inch thickness made of multi-ply wood built up of 8-10 laminations, and lightened in the manner shown in the accompanying sketch.

The service tank, which in the particular machine



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The hand-operated claw brake fitted on all Albatros biplanes.

captured appears to have been instrumental in forcing it to come down, since it was pierced in two places by some large projectile, is mounted underneath the upper plane, petrol being forced by pressure from the main tank.

A large exhaust collector or silencer is mounted on the right-hand side of the body, an exhaust pipe running back to a point behind the rear seat, so as to keep the occupants clear of the fumes.

The radiator, which is of the Hazet type, is similar to that fitted on the reconnaissance machine, with the exception that it has ten sections on each side as against the seven sections a side of the latter. This difference in size of radiator is, of course, accounted for by the difference in horse-power of the engines, one being of 120 h.p. and the other of 160 h.p.

Being of an older type than the reconnaissance biplane, the fighting machine does not present anything new in the way of detail constructions, which follow, as a



The Lights of London.

IN the House of Commons on Monday Mr. William Thorne asked the Home Secretary whether he could see his way to remove the London Lighting Restriction Order from Tuesday, December 21st, until and including Monday, December 27th.

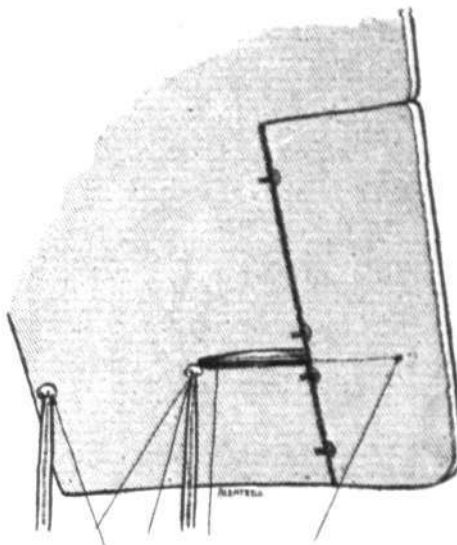
Sir J. Simon said the danger of attack from hostile aircraft at this time of the year was not one that could be disregarded. Certainly the danger would not be diminished by announcing in advance the dates between which London would be fully lighted. He regretted, therefore, that he was unable to comply with the request.

The Injured in Zeppelin Raids.

QUESTIONED in the House of Commons last week as to whether any special fund or provision was available for victims of Zeppelin raids, who had been maimed or injured and so impoverished or left unable to support themselves or their dependents, and for victims of the East Coast bombardments who had similarly suffered, the Chancellor of the Exchequer (Mr. McKenna) said:—In cases of injury or death due to hostile aircraft or bombardment up to July 17th last, relief was granted to the victims or their dependents by the Treasury on the recommendation of the East Coast Raid Committee. No special provision has been made from public funds

matter of fact, closely on the lines of the large span biplane flown by Thelm at Hendon in 1914.

The main planes are of the usual Albatros type, with the main spars comparatively close together, leaving a deep trailing edge. One alteration is to be found in the trailing edge, which in the machine under review is



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An aileron with its crank lever on the Albatros biplane.

double surfaced throughout, and not, as in the 1914 type, single surfaced for the last foot or so.

As in previous machines of this make, the under-carriage is of the "Vee" type, with four struts of streamline steel tubes filled with wood. The axle carrying the two large diameter disc wheels is of generous proportions, being some 2½ ins. in diameter. Such a heavy tube has, of course, been necessitated partly by the great weight of the machine and partly by the fact that it serves as a pivot for the claw brake seen in the illustrations.

The tail planes are somewhat different in shape from those of the usual Albatros machine, and are, it will be seen, of large dimensions, especially as regards the fixed horizontal tail plane. It seems probable that the object of this large stabiliser, the angle of incidence of which is adjustable (not in flight), is to preserve the longitudinal stability of the machine when flying with or without a gun and ammunition on board.

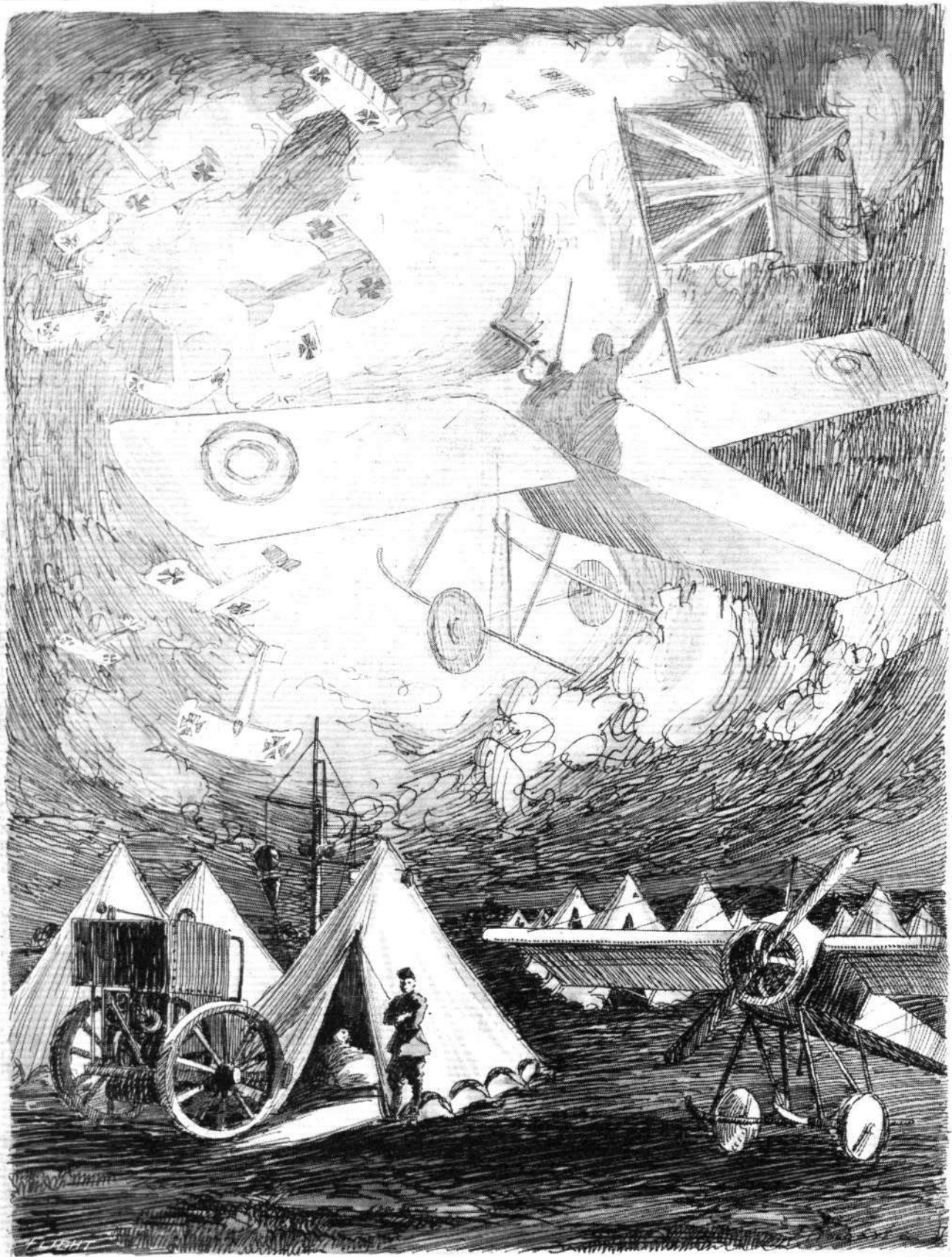


for persons who have sustained injuries or to dependents of persons killed after that date, but the Committee of the National Relief Fund have undertaken to make grants from that fund by way of temporary relief in deserving cases.

No Zeppelin Raids since October 13th.

DR. MACNAMARA, replying in the House of Commons to a question asked by Sir G. Scott Robertson as to how many abortive Zeppelin raids had taken place since the raid on October 13th last, and whether London might now, under existing arrangements, be considered as reasonably safe against such attacks, said:—The answer to the first part of the question is none. With regard to the second part, I cannot add anything to the statements already made by the First Lord.

Mr. Stuart Wortley: No raids or no abortive raids? Dr. Macnamara: We have had no report from our patrols. Sir A. Markham: Will the right hon. gentleman give an assurance that all raids which take place on this country will be reported? Dr. Macnamara: To the Central Authority, Yes. Sir A. Markham: Will they be reported to the Press? Dr. Macnamara: They will be reported.



At Christmas-tide, when our armies are, as always, ceaselessly alert, whilst to the dreamer, besides confused thoughts of Homeland, of fireside, and of love, come, above all—in the clouds—visions of heroic deeds of to-morrow. With the dread of the Censorship peril, our artist has kept clear of supplying the enemy with any clue as to the type of plane he has to provide against!



A true story of that which never happened. Being but an attempt to provide a little light reading for Christmas.

IN a green little village, in a green little spot in the southern counties, may be found a typical village school-yard. It is railed off from the village street with red railings, and contains within its precincts the school, which cannot be seen from the road, as it is fronted by a row of six almshouses of a single storey each, and the imposing mass of the two-storied house of the schoolmaster dividing the row. The almshouses had been erected by a munificent Lady of the Manor of bygone days, as a home of rest for poor widows of the village, and Cotton was the only child in the row, where he lived with old Widow Westmacott, and where we first make his acquaintance. His name was Darler—Alfred Darler, but, by one of those strange circumstances for which nobody could find a reason, he was always known as Cotton. Who he was or where he came from no one knew, with the exception of his old "Grandmother."

Cotton came to the village very young: too young to remember whence he came; but as time slipped on he grew into a pretty hefty lad, and was second biggest boy in the school, being beaten by only Colin Curtis, a huge lout, and the bully of the school.

Cotton should, from his size, have been able to protect himself and even champion the younger ones, but, truth to tell, Cotton was a coward. Other characteristics of his were, that he was never ready for anything at any time, and had a way of saying "In a minute," and that he always, on every occasion, had his pockets filled with food. Did his Granny call to him to know whether he was coming to his dinner it was always "In a minute." In class, when the copy-books were collected up at the end of the lesson, he had not quite finished, and it was "In a minute." He mixed with the other children in their games, but was easily put upon, and he would then leave the play and stand with his back against the school-wall and commence to eat something from his pocket. Colin Curtis was his terror—Colin would clout him all round the yard for the sheer pleasure of clouting. It was Colin who, when the ice was about and sliding in full run in the school-yard, fell out with Cotton because he said Cotton coming behind on the slide had pushed his legs under his own, so tripping him up. He rushed at poor Cotton, and they wound their legs round one another as schoolboys will, and fell on the slide, and Colin held his adversary's face down on the cold slide for a full two minutes, after which Cotton went to the wall and cried first, and started eating afterwards. Poor Cotton, anybody could do as they liked with him because, in spite of his size, he was a coward. When they had grown, all those concerned, to the age when the leaving of school for ever looms in the near future, Cotton fell in love,

schoolboy fashion, with Amelia Norton, an "out-town" scholar: that is, one who lived beyond the village boundary and had more than a mile to walk to school, bringing food for the midday meal to be consumed in the school-room.

Cotton fell into the habit of shyly walking home, or part of the way home, with this little girl, to the great glee of Colin, who used to follow them some way up the street and banter unmercifully. This had no visible effect on Cotton, because he was a coward and dared not say anything to the big bully. But one evening Colin, being unable to draw his enemy, put his big rough arms around the little girl and kissed her. And then Cotton found himself. The fight lasted quite ten minutes, during which the girl ran for home, leaving Cotton to punish his enemy for the insult, and all past misdeeds. This he did in right good fashion, finishing up by getting astride him, and pummelling his face as fast as both fists would work, for Cotton knew nothing about the rules of the game, knowing only that he had found his courage and had many scores to wipe out, and in his suddenly found strength rushed to excess with all the fervour of a new convert.

Afterwards he did not take advantage of his new position, but went about quietly as usual, nor sought to have anything to do with Colin, who wisely left him alone, but one day he had to interfere again.

There was talking in class, and the schoolmaster had from his desk called on Colin to desist. He answered in his bullying tone that it was not he. The master called on him to leave the class and come to his desk, but Colin in his obstinacy would not move, so the master came to fetch him. Before the whole school he threw his legs around the master and tripped him up, both falling to the ground to the accompaniment of the blackboard and easel, the master underneath.

Then Cotton intervened. He sorted out the fighters, and dragging Colin to the door, thrust him forth, never to enter again, for he was forbidden the school.

After school-days, Cotton went to work in a motor engineering works, and afterwards joined up with the Royal Flying Corps as a second A.M. His old quiet habits stuck to him, and he was strong without knowing it. Also it was a joke with his fellow workers that Cotton kept his pockets well provided with food, a habit which stood him in good stead one day.

Cotton was one of the best engine-men in the corps, and so it was that he got many trips in the air with flying officers when engines were under test. Often on long trips, he would be given control for shorter or longer periods, and so became skilful in the handling.

of machines, and only lacked the opportunity to learn starting and landing to become a good pilot.

The outbreak of war found him quickly at the front, where he came in for some rough handling and many hardships, all of which he took good-humouredly, saying it would be "all right in a minute."

The thing, of which this is a true account, happened when Cotton had been promoted to Sergeant, and was making frequent trips over the enemy's lines as observer and bomb-dropper.

For many days, aeroplanes from the enemy had scouted over our lines, and although our own machines had searched in the direction from which they always came, no report could be made of the location of their aerodrome. It was therefore thought that they were not flying straight to our lines, but were circling round in order to come in from a different direction and so mislead us as to the true position of their base. So one of our own machines was prepared with bombs to go out under the pilotage of Captain ——— with Sergeant Darler, our old friend Cotton, as observer, to try and reconnoitre the position of their aerodrome, and destroy it if possible, and Cotton, his pockets stuffed with his day's rations, which he had managed to draw, took his place as usual. We are not necessarily interested in the trip until their machine, well inside the German lines, had to descend owing to a large piece of shell disabling the engine, beyond even Cotton's power to repair. They landed on rough ground near the side of a large wood, breaking the chassis to pieces, which was of small matter, for one glance at the engine showed the hopelessness of returning. The machine was accordingly set on fire, and the two men dived into the wood in different directions in order that one or both should escape capture. The officer was unlucky enough to be taken, and now frets somewhere in a prisoners' camp, but Cotton was not found. Having penetrated well into the wood to escape detection, he lay low until night, hoping then to be able to crawl out in an attempt to reach our lines. He found a small stream where he could get water, and used a portion of his provisions to sustain himself. When it got dark, he started in the direction in which he thought he ought to go, but Cotton was never a clever scholar and knew nothing of steering by the stars, also he had not the slightest idea of the direction he ought to pursue, so, unknowingly, he went in an opposite direction, far into the wood, and in the early morning threw himself down under a heavy bush thoroughly exhausted.

How long he slept, he did not know, but he was awakened by hearing in the distance the tap, tap of steel on steel. He sat up and listened intently. Tap, tap, tap, it came. It sounded like somebody trying to drive a bolt home, and from the small tap which quickly followed the large one, Cotton surmised that somebody else was holding a weight against the jarring effects of the blow, and that, because he could hear it so plainly, it could not be far away.

Wriggling along on his hands and knees and stomach, he painfully made for the direction from which the sound came, fearing lest a snapping twig should discover his presence. Presently the tapping ceased, and he could hear voices. He was not yet near enough to hear what was said, or even to distinguish whether the talkers were English or German, so he cautiously crept forward until the clearing trees told him that he was nearing the edge of the wood. Once he had to crouch down with his face pressed to the ground as a man passed within a dozen yards of him, coming from somewhere on his

right, and emerging from the wood directly in front. When the footsteps had died down a little, Cotton ventured to raise his head and glance at the retreating figure, and he saw at once that it was a man in the uniform of the German Flying Corps. "Lummy," he said to himself, "it's a wonder he did not spot me. I'll creep forward and have a look out there in a minute. Wonder if I'm ever going to get out of this all right. I'm hungry, too, but that can wait a bit. Happen I shan't want any grub soon. Well, here goes."

Very carefully, and as silently as possible, he crept forward until only a few trees were between him and his object, and then he saw that he had tumbled right on to at least one of the aeroplane bases of the enemy. To the left, and facing his way, not more than two hundred yards away, there stood two temporary hangars of the canvas description, and two Albatros machines were drawn out and facing at right angles to the hangars. That is to say they had their tails pointing in his direction. A small group of officers and mechanics were standing round, and it was evident to his practised eye that they were preparing for a flight. Presently two of the officers climbed into one of the machines, and using the self-starter, the Mercedes engine was soon humming away, the whole of the mechanics pressing back the leading edge of the bottom plane. A wave of the hand, and they were off. Cotton watched them as they rose against the wind, going straight away from the place where he lay hidden. They were climbing but very slowly although the tail was down, and Cotton remarked to himself that the pilot had picked her up too quickly. Half a mile away, they seemed to have got very little higher, and the tail was now down to an alarming extent. In spite of himself, Cotton could not help saying out loud, "Flatten her out a bit, you cussed fool, you'll stall her in a minute. I can see it coming off." Instead of flattening out, the pilot made a banked turn to the left with the wind under his wings. The machine staggered for a moment, side-slipped, and crashed to the ground, striking with the wing-tip and the nose at the same moment, and instantly burst into flames.

Everybody rushed forward to assist, and Cotton did the same from sheer force of habit. Hardly was he clear of the wood, however, when he came to his senses and glanced around. There was not a soul left behind. From where he stood he could see into the hangars, and they were empty. He was about to retire into the wood again, when his usually slow working brain showed him the means of escape. Here was the other machine standing already to his hand, and nobody to say him nay. One quick glance round, and he sprinted for the machine and was quickly beside it. He put his foot in the step and glanced inside. It was as he thought. There on the left-hand side was the little Bosch self-starter. Quickly he jumped in and fixed the belt. He was too used to aeroplanes to forget the petrol tap and the switch, a few sharp turns of the small handle of the starter, and the engine roared out. As the machine moved over the ground, gaining speed every yard, Cotton could have shouted for joy. Halfway to the smash he gently pulled the control lever towards him and the machine leapt into the air. He passed over the blazing machine at a height of but a few hundred feet, and glanced down. Only a few of those on the ground looked up, and those seeing an Albatros thought nothing wrong, or if they did, thought it too late, and soon Cotton was sailing merrily along at a good altitude. He had sense enough to know that sailing an Albatros over German lines was a pretty safe proceeding, but he had to think out direction, and

endeavour to get back to the English lines. In the same instant it occurred to him that when he should arrive over English "Archies" flying a German machine, he would probably be in for a hot reception from his mates. However, it had to be done. He glanced at the sun, and remembered that, when starting yesterday at about the same time, they had flown towards the sun. He remembered the job he had had to look forward. He was flying in the same direction now, and guessed he would have to turn. He felt quite safe in his German mount, and thought it well to do a little reconnoitring on his own whilst he had such a good chance. For more than half an hour he flew around, gathering much information and seeing many other aerodromes in the distance, all of which he very carefully noted, and then made a right-about turn for home.

Hanging on each side of the machine in little wire baskets, he noticed six bombs, three on each side, and he had half a mind to drop them overboard. "In a minute," he said to himself, "perhaps I shall find something to drop them on." And he did. Twenty minutes later, he saw on his right, but well in front, some white farm buildings which he well knew to be the quarters of the German Staff in that district, having been out on a previous occasion to attempt bombing it, and having had to return without a shot owing to trouble with his beloved engine. This time he would be safe on a German machine, and he chuckled at the thought.

He planed down to three thousand feet, and could plainly see people moving about. At the right moment he let go of the control, and lifting one of the baskets

free of the spring clips which held it he turned it upside down, and released all three bombs at once, afterwards throwing the basket after them. He did not wait to observe the damage but sped away as the few first shots came flying after him. The gunners in front took up the running, and he had some very narrow escapes, but he got clear, emptying the other basket of bombs as he passed over the forward trenches. As he approached the English lines, our gunners at first did not shoot, being no doubt in wonderment as to why the Germans should fire at one of their own aircraft. Unluckily, however, one gun opened fire, and he was quickly in the midst of bursting shells. An idea struck him, and he took off his tunic with Royal Flying Corps on the shoulder, and dropped it over, hoping they would understand, and then chanced it in a spiral descent. Shots continued to pass him as his altitude diminished, and burst above, and when only a few hundred feet up, one cut away one side of his elevator, making the machine very unstable. Now, however, they recognize that he was about to land, and firing ceased. He manoeuvred as well as he could with a broken elevator and his lack of knowledge, touched the ground, sprang twenty feet into the air, pancaked, carried away the chassis and turned over bottom upwards.

Cotton had got home with the information required, and nothing worse than a broken leg. They had to dig him out of the *débris*, and laid him on the ground as the C.O. came up. And as Cotton fainted he murmured as he tried to salute his chief: "Returned with information, Sir. I'll—tell—you—in—minute."



"Life is a mirror—smile at it and it will smile back; frown at it and it will frown again."

Santa Claus Up to Date.

At Christmas-time across the sky
Good Santa Claus was wont to fly
When peace reigned o'er our land.
He came in safety without fear;
Drawn by a team of tame reindeer—
Or so I understand.
His sleigh with toys was heaped full high—
They must have cost a pile to buy,
He'd such an open hand!

This year folk wonder what he'll do,
If he will dare the heavens blue,
And show he's not afraid;
Since children in the British Isles
Should not be cheated of their smiles.
Although bad Zeps may raid.
The toys he used to get of yore
In Nuremburg, he'll buy no more;
He now supports "home" trade!

And so, my friends, I'd fain believe
We'll see again, on Christmas Eve,
His airship in the sky.
His gifts for little maid and man
Will prove he's keeping to his plan,
Which never goes awry.
His monoplane, upon the wing,
A message of "Goodwill" will sing
As in the years gone by!

Then welcome to you, Santa Claus!
Your flights are in no frightful cause;
They give the youngsters fun.
The flags and drums delight each boy;
To every girl Nurse Dolls bring joy
Despite the hateful Hun.
But just one word of warning here:
When he shall, true to time, appear,
Don't use an aircraft gun!

Charles H. Mansfield, in *Answers*.

ONE of the makers of "mottoes" for crackers has perpetrated the following this season:—

"I don't care whether he's a dark or fair man
So long as my boy is a naval airman."

Toward the Setting Sun.

SOMEBODY has found that Zeppelins only come over when the wind is westerly, so that in case of disablement they shall not drift west. The A.A. men think that the next one to come over will "Go West," be the wind from any quarter.

In Darkest London.

NERVOUS LADY (opening taxi door, to delighted taxi cabman):
"To the other side of the street, please."—*Punch*.

Unrecorded Sayings of Popular Pilots and Their Friends.

"How's your father?"—J.C.
"'Tis a glorious sunset; I've half a mind to go up."—C.W.
"HAVE you seen my new 'car'?—she's hot stuff."—S.P.

EDDIES

OF the many pupils who have passed their tests for the R.Ae.C. certificate at the civilian schools at Hendon a large percentage—very large in fact—have joined up with one or other of the Air Services. Some of them have at present only got as near the fighting as some one of our air stations may be distant, where they are rapidly but thoroughly preparing themselves for the task that is awaiting them on the other side. Many have, however, already passed over the streak to France or Belgium or gone to the Dardanelles or “somewhere” else, and are doing good work in the cause of the Allies. As far as one can judge from conversation with service aviators home on leave, there is plenty to do out yonder, wherever it may be, but when it comes to trying to elicit a little information out of them, regarding their experiences in the air, these men, good and true, never will admit that they have had any doing worth talking about. The minute you get them to relate some of the adventures that a fellow pilot has had, however, they are willing enough to speak up.

x x x

It was in this manner that I heard the other day of an experience that an old Hendon pupil had while flying over the German lines. The pilot in question was M. Georges M. Chapelle, who, it may be recollected, passed for his “ticket” at the Beatty school. After leaving the school, Chapelle joined up with the French air services, where he got on so well that he was told off to fly one of the large French “battle” planes one day. Some time ago, he was flying over the German lines, being apparently singled out for special attention from the “Archies.” Everything went well, however, in spite of the uncomfortable closeness of some of the “puffs.” Suddenly, after a number of misses, one of the guns got the range and succeeded in timing a shell to explode in the immediate vicinity of the twin-engine Caudron. A fragment passed through the central nacelle, breaking, as it went, a few odds and ends inside, including the rudder control cables. Now it cannot be a very comfortable feeling to kick your foot-bar about and find that nothing happens, especially if you are being peppered all the while by anti-aircraft guns, and, rudders or no rudders, Chapelle decided it was about time to shift the target to somewhere else. Having no control over the rudders, steering was not an easy matter until he got busy with the two throttle levers. By running first one and then the other engine all out, keeping the engine on the other side throttled down, he found that it was possible to manoeuvre tolerably well, and was soon beyond the reach of the Archies. By a streak of good luck both engines kept running steadily, and Chapelle managed to land safely behind the French lines. Had one of the motors turned sulky, there might have been a different story to tell. As it was, it must have been a pretty uncomfortable journey from the time the rudder cables went until the landing. Another mark on the score sheet of the Caudron “Twin.”

From Capt. C. Tyrer, who will be remembered by readers from his association with the Grahame-White Aviation Co. at Hendon in the old days of racing, we have received a line saying that he is out in Belgian Congo. Tyrer is now a Lieutenant R.N.V.R., and is, he says, enjoying plenty of scrapping. It is very hot out there in every way, and one can sympathise with the writer when he expresses the wish that he had a ‘plane. It would be rather a good way of keeping cool. An aeroplane would, I should imagine, look a bit odd over Lake Tanganyika, but of course the day is rapidly approaching when aircraft will be seen in much more unlikely places.

x x x

From another old friend—Louis Noel—we have had yet another postcard telling us that he had arrived at Salonika after ten days of rough sea journey. The boat on which Noel made the trip was very unstable, he says, and it was very “bumpy.” He is still with the M. F. Escadrille 88 and glad to be so, I imagine, for I do not know of any pilot who is so enthusiastic about the Maurice Farmans as Noel. He wishes to be remembered to all friends in this country.

x x x

They are telling a rather amusing yarn about a pilot of not very lengthy experience, who went for a cross-country flight some little while back. He had to get to earth on account of engine trouble, and as it was getting late he decided to stay the night, leaving his machine where he had landed. Early the next morning he was on the spot, and attempted to start with the aid of a crowd of onlookers, who bravely attempted to make up with willingness for what they lacked in experience of propeller swinging. For over an hour, rumour has it, they struggled gamely, the only result being a few splutters of the engine and a lot of sore knuckles. After slogging away at it for some time one of them remembered that he knew a man who knew something about “them there air-planes,” and he consequently trotted off to find him. Luckily, the man of knowledge was at home, and willingly consented to render any help he could. Arriving on the scene of the struggle he quietly watched the proceedings for a little while, and then modestly approached the pilot and asked what was the trouble and if he could help. The pilot replied that it was all right, it was only a bit awkward to get started, and he did not want any help. The expert then said that if he did not want any help he might perhaps be willing to listen to advice. The pilot then mumbled something about a lot of people who knew all about it, but any way what was the tip? The motor expert meekly pointed out that, if the propeller was swung around the other way—for which it was designed—better results might follow. A little bit unlikely that the pilot should not know which way his propeller revolved, isn’t it? Still it might have gone the other way round in this particular machine. In any case I cannot guarantee the truth of the story.

Hendon was a very uncomfortable place the other day when I was up there. Not only was there so much wind that there was hardly any flying, but a rattle like that of machine-gun fire kept dinning in one's ears. When I was unable to stand the clatter any longer I made my way behind the grand stand in the shilling enclosure, whence the sound seemed to emanate. Up at the far corner, on a framework of posts and beams, I found the source of the din. It was one of the Beatty engines undergoing tests. When I saw it it was revolving at 1,600 p.m. with the throttle far from fully open, and as Beatty opened her up she went to well above 1,700 when she was developing something like 55 h.p., which is not bad for a little four-cylinder engine. She had then been running for about an hour, and later in the evening when I left the aerodrome I could hear her humming as far as the Welsh Harp. The idea was, I understood, to run her until something broke, so for all I know she may be at it still. Beatty has now been fiddling about with his engines for something like a year, but as he is not satisfied until he has got an engine that is as nearly perfect

as it is possible to get it, he still keeps up experimenting and altering and lightening and improving. When he does succeed in getting his engine to a point of perfection that satisfies him you may take it that there is not much the matter with it. That stage is not very far off now, I should say, and when the monobloc cylinders are fitted it is expected that further improvements will be effected. At the moment of writing this I have been talking to Beatty over the 'phone, and I can still hear her running, but she *has* had a rest, so I am told.

x x x

Two of our pilots, whose names would be familiar to all our readers dare I divulge them, were married recently, and both went up to a place on the north coast called Wighton (at least that is what I prefer to call it; one has to be so careful when mentioning the names of places these days). Neither knew that the other had got married, and so you can imagine their surprise at finding themselves and their respective spouses at adjoining tables one fine day.

ÆOLUS.



London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School (R.N.A.S.).—Straights last week with instructor: Probationary Flight Sub-Lieuts. Cook, Cuckney, Newton, Rampling, Hockey, and West. Landing practice and circuits alone: Probationary Flight Sub-Lieut. Ovens. Eights with instructor: Probationary Flight Sub-Lieut. Aird.

Grahame-White Civilian School.—Straights with instructor: Messrs. Grasset, Hallet, Hathaway, Henshaw, Matthews, McLaurie Smith, and Verguilt. Circuits and eights: Messrs. Gammon and Lewis. Eights alone: Messrs. Hughes and Yates.

Instructors during week: Messrs. Pashley, Russell, and Winter.

Owing to bad weather, further practice impossible.

Beatty School.—The following pupils were out during last week: Messrs. Baldwin, Baker, Barnes, Barrow, Begg, Bowick, Branford, Brynildsen, Byrne, Collier, Drysdale, Edwards, Fellowes, Godfrey, Hodgson, Hughes, Jones, Martin, Mottos, Murdoch, Onley, Owen, Patterson, Podmore, Samter, Thompson, Whincup, Williams, Young, White, d'Allesina, Sellars, Aoyong, Wainwright, Johnson, Jaquin, and Greenhill.

The instructors were Messrs. G. W. Beatty, W. Roche-Kelly, R. W. Kenworthy, G. Virgilio, A. E. Mitchell, and L. L. King, the machines in use being Beatty-Wright dual-control and single-seater propeller biplanes and Caudron tractor biplanes.

Mr. R. G. Begg flew for his ticket.

Hall School.—Owing to better weather conditions, the Hall School had better practice last week. A very good certificate was taken by Mr. Rattray, of South Africa. Mr. Stirling is now quite ready to take his ticket.

The following pupils were out receiving practice during the past week with Instructor Stevens: Rattray, Stirling, and Wilkins doing circuits, figures of eight, and landings alone. With Cecil M. Hill: Capt. Grey, Mann, Dresser, Redford, Shum, Butterworth, Cook, Evans, Dodd, and Sepulchre, doing circuits or straight flights and landings. With John Drew: Arnsby, Wooley, Ormerod, Chapman, Le Coq Moir, Lieut. Cooke, Collins, Ridley, Camberbirch, Smith, Thom, Baron Ackroyd, Cosgrave, doing rolling practice and straights.

For the first time since the declaration of war, the pupils and staff of the Hall School will have a well-deserved vacation from December 24th to December 30th.

London and Provincial Aviation Co.—Pupils doing rolling last week: Messrs. Loomes, Egelstaff, Snow, and Rimer. Doing straights: Messrs. Thorpe, Lambert, Heyn, Medaets, and Van Roggen. Doing circuits and eights: Messrs. Martin and Burgess; the latter has taken part of the tests for his certificate.

Instructors: Messrs. W. T. Warren, M. G. Smiles, C. M. Jacques, H. Sykes, and W. T. Warren, jun.

An excellent Royal Aero Club certificate was taken on the 14th inst. by Mr. N. E. Woods.

Ruffy-Baumann School.—Pupils with instructors last week: Dobson, Cuthbertson, Vernon, Laidlaw, Whitaker, Edgar, Viule, Cox, Pauli, Hamtiaux, and Hoskyn. Straights or rolling alone: Tomson, Cole, and Griffith. Eights or circuits alone: Tomson and Cole.

Instructors: Edouard Baumann, Felix Ruffy, Ami Baumann, and Clarence Winchester.

Certificates taken: Messrs. Martin Tomson and Stuart Cole passed in very good style, both accomplishing *vol planés* in a dignified manner, the latter from 1,000 ft.



I CANNOT bring myself at this season to wish my readers A Merry Christmas. My wishes in this direction are as sincere as ever, but in the face of present happenings I can but hope that this time of usual joyousness and festivities will be at least peaceful.

There are those of us who, were we selfish and uncharitable—those of us whose little households have up to the present escaped the notice of death's dark angel—could, were we so minded, rejoice and make merry. But in this dark year of 1915, the British people are one as they have never been one before. The classes and the masses have been bound into a common people by the powerful god of war, and to-day we stand on a single footing as the champions of Christianity and the destroyers of hypocrisy, sharing equally in all the sorrows unavoidable in our fight for right and freedom.

During the year which is passing, afflictions have been many and heavy; they rest on the shoulders of us all, and we cannot be merry. But we can be peaceful, and try to bear our troubles stoically, as befitting our glorious Nation, and as confounding to our enemies.

Whether or not December 25th was the exact day on which Christ, our great Leader and Teacher, was born, matters not. It represents to us the day of His Nativity. And in this year, when we His subjects are perhaps doing more than we ever did before to safeguard His teachings, which are in danger of being trampled underfoot by our despotic enemies, let us think not so much of rejoicings and festivities as of quiet thankfulness that we are fighting the good cause—His cause.

That we English take our pleasures sadly has grown to be an axiom, therefore we shall not have to alter greatly from our usual habits. Nor is it either necessary or to be wished that old customs should suffer. We shall eat our Christmas dinner amidst the usual good humour, and we shall toast our friends, present and absent, in something stronger than water. Also the young people shall be looked after, for it must be seen to that their pleasures are not curtailed, as their time of trouble and care is not yet, though it will come all too soon with the effluxion of time.

We elders know, however, that whatever good face we may put upon matters on this day for the benefit of the youngsters, this Christmas Day is not as those that are behind us in this generation.

Hundreds of thousands of those who sat with us in the past have gone to their long rest, and, unfortunately, multitudes must follow before the rabid hoard of our enemies is beaten to its knees. Bad as this Christmas Day will be, next year it will be worse—we must make up our minds to that. It is inevitable that many of those with us this year will sit to our board for the last time. Let us, therefore, think for just a few moments on this day of the true state of affairs, even though it makes us sad.

We are an undemonstrative people. If we have sorrow, we do not like it to be known: religious, our best

friends know it not: in prayer, we act secretly. Therefore we need not shout our intentions from the house-top, and yet remain true to ourselves when, on this Day, without moving our lips, we offer our humble prayer for those in necessity. To those who are gone, God rest their souls. To those who are to follow, God grant a peaceful end. To those bereft, God grant His blessing and protection. To those left, God grant strength to exact the uttermost retribution. GOD SAVE THE KING. And so to our festivities.

It is a pleasing thought to me that not one of the toys dangling from the Christmas Tree this year shall be of German manufacture. I take it that even should there be toy dealers with German goods left on their hands from previous years who have not been patriotic enough to destroy them, that English parents and relatives will take every care not to purchase them knowingly. Were it not for the pleasure it brings to the children, I would even do away with the tree, as being of German origin. Lord! what a nation of copyists we have been in the past. I know not whether we have been asleep all these countless years, or whether we have been too content to rest on our laurels. Maybe we have simply got horribly lazy, and have allowed others to do that which we might easily have done ourselves. I know only this, that we in this country are not lacking in the skill to provide for ourselves everything short of that which our position geographically impels us to import, would we only just simply wake up and get busy.

It is not necessary to be a clairvoyant to see these things; one has but to look around to see that for years we have simply followed other nations, not only Germany, but others, in producing the things which we require, or, as is mostly the case, simply letting other nations supply us without making any effort to supply ourselves. Aeroplanes, motor cars, almost everything, look where you will we have, anyway at the commencement of these things, come along a bad second, or have in other directions failed to come along at all. It is true we are good at improving on the ideas of others, and we "get there" in the end, but for goodness sake let this war have the effect of waking us up to our responsibilities as a nation, and let's weigh in and do things. And I do hope that when this war is ended, those in authority will do something to prevent German goods coming into this country to be sold at competitive prices, or even to prevent them coming in at all. We don't want German goods, or German men, or German anything—to the pit of Kultur with the whole lot of them.

No! I am not a BIT grumpy to-day, and I am NOT going to have a miserable Christmas if I can help it. But I DO realise what fools we have all been in the past, and mean, for my part, to make some strong resolutions on New Year's Eve, which I shall endeavour to act up to. One of them will be never to shake hands with a German again, and I don't care twopence-a-penny who knows it.

The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

Aviators' Certificates.

THE following Aviators' Certificates have been granted :—

- 2146 Alexander Comber Wilson (Maurice Farman Biplane, Military School, Shoreham). Aug. 9th, 1915.
- 2147 Flight Sub-Lieut. John Alexander Smith, R.N.A.S. (Maurice Farman Biplane, Central Flying School, Upavon). Dec. 9th, 1915.
- 2148 Second Lieut. Sturley Philip Simpson (Maurice Farman Biplane, Military School, Farnborough). Dec. 12th, 1915.
- 2149 Flight Sub-Lieut. Frederick Middleton Fox, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Dec. 13th, 1915.
- 2150 William John Martin Tomson (Caudron Biplane, Ruffly-Baumann School, Hendon). Dec. 13th, 1915.
- 2151 Lieut. Patrick Alexander Ogilvie Leask (2nd Royal Irish Rifles) (Maurice Farman Biplane, Military School, Birmingham). Dec. 13th, 1915.
- 2152 Second Lieut. Gerald Howard Wilkinson (9th Buffs) (Maurice Farman Biplane, Military School, Birmingham). Dec. 13th, 1915.
- 2153 Stanley Forrester Browning (Maurice Farman Biplane, Military School, Brooklands). Dec. 13th, 1915.
- 2154 Second Lieut. John Kenneth Summers (Royal Warwickshire Regt.) (Maurice Farman Biplane, Military School, Birmingham). Dec. 13th, 1915.
- 2155 Kenneth Edward Page (Maurice Farman Biplane, Military School, Brooklands). Dec. 13th, 1915.
- 2156 Arthur Goulburn Brooke (Maurice Farman Biplane, Military School, Brooklands). Dec. 13th, 1915.
- 2157 Second Lieut. Allan Maxwell Lowery, R.F.A. (Maurice Farman Biplane, Military School, Birmingham). Dec. 13th, 1915.
- 2158 Francis Reginald Hudson (Maurice Farman Biplane, Military School, Brooklands). Dec. 13th, 1915.
- 2159 Norman Edward Woods (L. & P. Biplane, London & Provincial School, Hendon). Dec. 14th, 1915.
- 2160 Edwin Stuart Travis Cole (Caudron Biplane, Ruffly-Baumann School, Hendon). Dec. 14th, 1915.
- 2161 Rivers Gordon Begg (Caudron Biplane, Beatty School, Hendon). Dec. 14th, 1915.
- 2162 Robert Sutherland Rattray (Hall Biplane, Hall School, Hendon). Dec. 14th, 1915.
- 2163 Second Lieut. Roland Henry Peck (Dorsetshire Regt.) (Maurice Farman Biplane, Central Flying School, Upavon). Oct. 1st, 1915.
- 2164 Second Lieut. Rupert Chandos Bryant (9th Royal West Surrey Regt.) (Maurice Farman Biplane, Military School, Shoreham). Nov. 27th, 1915.
- 2165 Second Lieut. James Alexander Simpson (11th Black Watch) (Maurice Farman Biplane, Military School, Shoreham). Dec. 5th, 1915.
- 2166 Second Lieut. Edward Athelstan Halford (Wiltshire Regt.) (Maurice Farman Biplane, Military School, Farnborough). Dec. 9th, 1915.
- 2167 Second Lieut. Francis Revel Offord (3rd Royal Munster Fusiliers) (Maurice Farman Biplane, Military School, Thetford). Dec. 9th, 1915.
- 2168 Lieut. Herbert Bainbrigge Russell, R.F.A. (Maurice Farman Biplane, Military School, Farnborough). Dec. 12th, 1915.
- 2169 Second Lieut. Charles Herbert Hills (Maurice Farman Biplane, Military School, Farnborough). Dec. 12th, 1915.
- 2170 Lieut. Eben Hall Gibbon, R.E. (Maurice Farman Biplane, Military School, Norwich). Dec. 13th, 1915.
- 2171 Flight Sub-Lieut. Carl Damien Newman, R.N.A.S. (Maurice Farman Biplane, Central Flying School, Upavon). Dec. 13th, 1915.
- 2172 Second Lieut. Charles Bernard Bond (5th Middlesex Regt.) (Maurice Farman Biplane, Military School, Farnborough). Dec. 14th, 1915.
- 2173 Second Lieut. Ernest Claude Winkley (Maurice Farman Biplane, Military School, Birmingham). Dec. 16th, 1915.

- 2174 Stewart W. Thompson (Maurice Farman Biplane, Military School, Birmingham). Dec. 16th, 1915.
- 2175 Commander Clement Richard Dane, R.N. (Maurice Farman Biplane, Central Flying School, Upavon). Dec. 16th, 1915.
- 2176 Wallace Sinclair Earle (Maurice Farman Biplane, Military School, Brooklands). Dec. 17th, 1915.
- 2177 Flight Lieut. Thomas Archibald Batchelor, R.N.A.S. (Maurice Farman Biplane, Central Flying School, Upavon). Dec. 17th, 1915.
- 2178 Flight Sub-Lieut. John Hermann Woolner, R.N.A.S. (Short Biplane, Royal Naval Flying School, Eastchurch). Dec. 17th, 1915.
- 2179 Flight Sub-Lieut. Charles William Greig, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Dec. 17th, 1915.
- 2180 Flight Sub-Lieut. Augustine Francis Marlowe, R.N.A.S. (Grahame-White Biplane, Royal Naval Air Station, Chingford). Dec. 17th, 1915.

AMERICAN CERTIFICATE.

- 363 Cuthbert J. Creery (Wright Biplane, Wright School, Dayton, Ohio). Nov. 24th, 1915.

Aeronaut's Certificate.

The following Aeronaut's certificate has been granted :—

- 57 Flight Sub-Lieut. Henry Edward Parker, R.N.A.S. Dec. 15th, 1915.

Christmas Holidays.

The Club will be closed from 7 p.m. on Friday, the 24th inst., till 9 a.m. on Monday, the 27th inst.

The Servants' Christmas Fund.

The subscription list for this fund is now open.

Extension of the Hours of Opening the Club.

The Club is now open from 9 a.m. to 10.30 p.m. each day, including Sunday.

THE FLYING SERVICES FUND

administered by

THE ROYAL AERO CLUB.

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

Subscriptions.

	£	s.	d.
Total subscriptions received to Dec. 15th, 1915	10,099	14	7
Collected at the Westland Aircraft Works, Yeovil (Twelfth contribution) ...	0	7	4
Staff and Workers of Gwynnes, Ltd. (Fifth contribution) ...	11	13	9
Total, December 21st, 1915...	10,111	15	8

B. STEVENSON, Assistant Secretary.

166, Piccadilly, W.

NEW LIGHTING REGULATIONS.

ON Monday the Home Office issued the new Order relating to the restrictions as to lights on vehicles, which codifies all the orders previously issued—a step in the right direction. The new Order comes into force on January 10th.

The first part of the Order extends the following provisions, which already apply in many areas, to the whole country outside the metropolitan area :—

(1) The lighting-up time for all vehicles is to be half an hour after sunset ;

(2) The requirement to carry lights is extended to all vehicles using the roadway, including vehicles drawn or pushed by hand ; and

(3) All vehicles are required to carry a lamp showing a red light to the rear, and a separate lamp carried at the rear is made compulsory for all except hand vehicles.

As there may be a temporary deficiency in the supply of lamps, the operation of the last requirement is postponed until February 10, 1916, in those areas where vehicles are not now required to carry rear lights.

These measures are necessary for the public safety both because of the reduction of street lighting in many large areas, and because of the general increase in the volume of naval and military motor traffic on the roads at night.

The remainder of the Order deals with the reduction of lights on vehicles in those areas where bright lights might serve to guide hostile aircraft. These areas include the following :—

The whole counties of Anglesey, Bedford, Cambridge, and the Isle of Ely, Essex, Herts, Kent, and Surrey (outside the metropolitan police district), Hants, Hunts, Lincoln, Norfolk, Suffolk, Sussex, and Yorks (E. Riding).

The prohibited areas in Durham, Northumberland, and the North Riding of Yorkshire ;

The principal towns in Berks, Bucks, Leicestershire, Notts, Warwickshire, and the East Riding of Yorkshire ;

Within six miles of the sea in the following counties :—Cardigan, Carmarthen, Carnarvon, Cheshire, Cornwall, Cumberland, Denbigh, Devon, Dorset, Flint, Glamorgan, Gloucester,

Lancashire (including Manchester, Salford, and Stretford), Merioneth, Monmouth, Pembroke, Somerset, Westmorland ; Also the following :—Boroughs of Chesterfield and Northampton, county and city of Peterborough, Smethwick, Tamworth, and West Bromwich and Oldbury.

When the existing Orders were issued some months ago it had not been found practicable to fix standards for the size and power of the different types of lamp. Strong representations have, however, been received from the naval and military authorities, from the police authorities, and from motorists that the absence of uniform and definite standards creates serious difficulties both for the users of vehicles and for the police. Exhaustive experiments have now been made by the expert officers of the War Office and Admiralty, and representative motorists have been consulted, and as a result it has been possible in the present Order to prescribe the standards of maximum size and power and method of obscuring the different types of lamp.

The general effect is that in the areas where the restrictions apply, the use of headlights is prohibited, but sidelights are allowed of sufficient brightness to afford a reasonable driving light for ordinary speeds. It is found, however, that sidelights which can be allowed on country roads are a source of danger in towns, where the large number of lighted vehicles makes the lines of the main streets visible to aircraft, and it has therefore been necessary to require sidelights to be further reduced in large towns in the eastern counties. In the case of electric and acetylene lamps, this is to be done by placing over the front of the lamp, or inside the front glass, a perforated cap or disc, of an official design, and which can be easily made from thin metal or cardboard, to fit most forms of lamps.

The list of the places where these special restrictions apply includes the principal towns in Beds, Cambs, Durham, Essex, Hants, Kent, Lincoln, Norfolk, Northampton, Northumberland, Suffolk, Surrey, Sussex, Yorks (E. and N. Riding). Arrangements are being made to indicate by distinctive signs on street lamps the boundaries at which the cap or disc must be used. A similar arrangement will be made (using a different sign) to indicate the boundaries of the towns in the Midlands where headlights must be extinguished.

AIRCRAFT AND THE WAR.

AN Exchange message from Paris on December 16th said :—

“The news that a German airship had succeeded in crossing the French lines at Jonohery reached the Military Governor of Paris about 8.15 p.m. on Monday evening. Orders were at once sent to the aviation centres, and in less than five minutes a large squadron was in the air ready to attack the airship, but the latter gave them no opportunity of doing so. The German commander, finding himself within range of the searchlights and fired upon from various directions, turned back after flying a distance of about sixteen miles.”

According to *The Times* correspondent the airship was a Zeppelin.

In the *Matin* of December 17th, the following thrilling account was given of the work of some of the French aviators who took part in the Serbian retreat :—

“Twelve of the French pilots decided to follow the Serbian Army in the retreat from Nish to Kralievo and then through Prishtina to Prizrend. They repaired their machines at night time with old pieces of cloth and piano wires. They used their petrol to the last litre, without saying a word to the Serbian General Staff. They suffered hunger without complaining.

“Two of them, one a very popular pilot and the other an officer, anxious to give important and accurate news quickly to the Allies, flew from Prizrend to Avlona, flying through a pass not more than 600 ft. broad in the Drin Valley, despite a thick fog. Finally, after having crossed the mountains, they landed at Avlona before the astonished Italians, who gave them an enthusiastic reception. There only remained in their tanks enough petrol to allow them to fly for two more minutes.”

The special correspondent of the Central News in Petrograd, in a despatch dealing with the situation on the Russian Northern Front, said :—

“A big aeroplane station has been organised in Libau, and work is proceeding energetically on the construction of an enormous hangar, where Zeppelin parts, brought from Germany, will be put

together. Some of the Libau factories have been working for the Germans in the preparation of war material for months with Von Wolfstrau, an engineer, at the head. The general situation of the people is painful to a degree, and they wait with anxiety for their liberation.”

In a despatch from Mr. H. Warner Allen, the special correspondent of the British Press with the French Armies, the following occurs :—

“The first line of barbed wire and the enemy's parapets behind can usually be seen from the opposing trenches by means of the periscope, without excessive risk. Behind, the ground has been carefully reconnoitred by the aeroplanes and captive balloons, and most detailed maps have been made of the enemy's system of trenches. Nothing is more amazing to the untrained eye than the elaborate way in which aeroplane photographs are fitted together, like pieces of a jig-saw puzzle, until they form a whole from which not a single deviation of the trenches and not a little mark that marks a machine-gun or mine-thrower shelter has been omitted.”

In a conversation with a correspondent of the *Telegraaf* recently, some Dutch workmen, who had recently returned from Cologne, declared that there were 200 aeroplanes near Cologne which had never been used.

Mr. H. F. Prevost Battersby, writing to the *Morning Post* from the British Headquarters regarding the German attack on Ypres on the 19th, said :—

“The fight on Sunday was carried on with far greater vigour in the air ; it became, indeed, one of the most noticeable that we have yet seen. Close upon thirty duels were fought between planes, and not one of these terminated in the enemy's favour. Seventeen of them were carried to a decisive issue, ending either in the flight of the German plane or in its being driven to earth ; three hurried descents being made to escape destruction, and in one case the enemy fell flaming to the ground. None of our machines failed to report itself at the close of the day, but there were few which had come entirely unscathed out of the day's fighting.”



ALL communications in connection with this section should be addressed to the Model Editor, "FLIGHT," 44, St. Martin's Lane, London, W.C. Correspondents are requested to write on one side of the paper only.

Scale Models v. Flying Sticks.

MR. H. SIBLEY writes as follows:—

"Owing to the fact that I am a keen model enthusiast, dating as far back as 1909, I do not think I shall be over presumptuous in sending along to you a few comments on the letter in your last issue under the *nom de plume* 'Scale Model.'

"Whether or not 'Scale Model' has ever done any actual model work or whether he is merely acting as an armchair critic I do not know, but to anyone who has 'dabbled' in model aeroplanes in the smallest way, the 'why and wherefore' of his letter will be apparent.

"Why do most models bear so little a resemblance to full-size machines?"

"(1) *Cost*.—All aeromodelists have not the superfluity of cash to buy the necessary materials to build a 'scale model.'

"(2) *Size*.—If the model is to be a 'scale model,' it has got to be built on fairly big lines—at least a 4 ft. wing span; and those who have experimented with models of this size (especially tractors) will fully understand the difficulties to be encountered.

"(3) *Repair, &c.*—One of the greatest setbacks to model aviation is that all models once released into the air have got sooner or later to land, and in this I think lies the crux of the whole question. In the early days when I was 'a red hot' enthusiast, I spent a great deal of time in designing the most elaborate form of chassis that I was capable of—and the result! four or five hours' work—one hour's journey to the testing ground, carrying 'the fruits of my labour' carefully wrapped up in a more or less businesslike fashion—another 30 minutes occupied in the assembling and 'truing up' of machine, after which came the supreme moment of launching the machine into the air and the resultant flight (sometimes!) and in nine cases out of ten, the work of hours was reduced to *nil* in as many seconds; the walk home afterwards with a much smaller parcel, feeling a little sceptical as to whether *any* chassis could be made to stand up to its work on all occasions.

"In time, like many others, I suppose I grew rather tired of the eternal *bois casse*, and I began to make my chassis (also machine) more simple, until I ultimately got down to the only type of chassis that will stand up to its work—a wire one; also, in the meantime, my machines assumed a more 'flying stick' aspect.

"In passing, I think it is interesting to note how full-size work has followed along the lines of models in the question of landing gear—the elaborate arrangements that one used to see in the early days have in most cases entirely disappeared, their place being taken to-day by a simple form of V chassis composed of steel tubes—in model form constitute wire in place of the steel tubes, and it shows how years ago model workers had found out the most efficient form of chassis—to wit—the simple V type.

"(3) *Duration of flight*.—After all is said and done, the chief thing for which a model is designed is that it shall be able to travel through the air, and it is in this direction that the 'scale model' falls a long way short (in more senses than one) of its more popular brother the 'flying stick.'

"Personally speaking, I think that if one has an absolutely fresh type of machine to test in model form—the A frame or hollow spar is the best type of construction to use in the way of a power unit.

However, when we come to the rock bottom of things, 'Is there any new problem to be solved as to stability, &c.? and if so, can it not be tried just as well, if not better, on a full-size scale than in model form?'

"I do not wish to be misunderstood; even to-day after six years model work it still gives me pleasure to watch one of these machines in flight, but as to any *real* advance I think that model aviation work has reached its highest point—even if one has a new form of wing shape to test (and I have tried many) one is forced in time to the ultimate conclusion that the greatest factor in model work, and full size too for that matter, is motive power; given plenty of power almost any type of machine can be made to fly equally well (I am here writing as to wing forms, &c.).

"Having had my 'little say,' I trust that someone else more capable than I will do his bit if only to criticise what I have written."

Mr. N. McKernan also writes:—

"I am of the opinion that 'Scale Model' has struck the right note in your issue dated December 17th.

"If there is such a club in existence which encourages 'real' models, or if one is in formation, I should be extremely glad to have the fullest particulars concerning same as it is a subject which interests me deeply."

Scale Models.

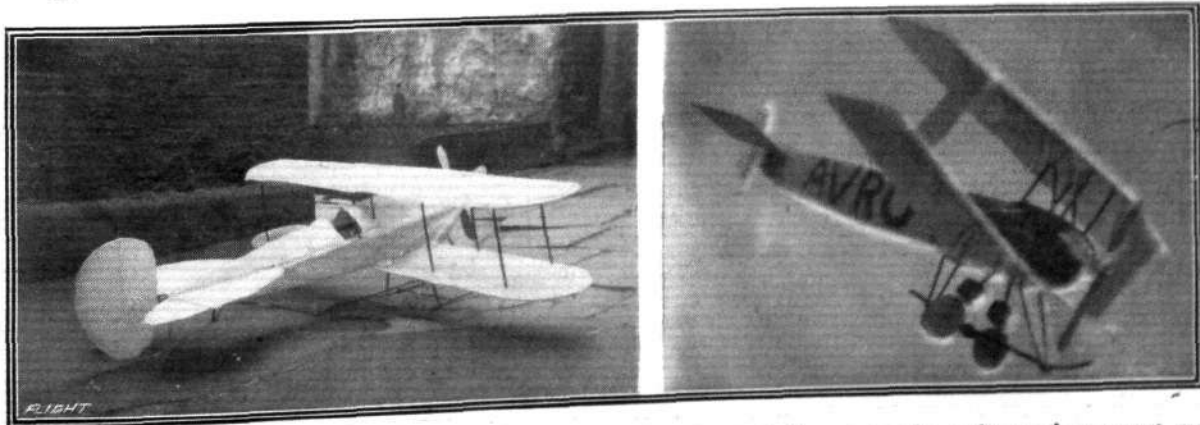
In sending along the photograph of the B. E. biplane, which is reproduced below, Mr. G. Stuart-Bell says that it was originally made to illustrate a lecture on the history of aviation given before a debating society. It has a span of 5½ ft., with double surfaced planes and rubber sprung chassis. Mr. Stuart-Bell would be pleased to give readers any information or drawings regarding this model.

The other photo. shows a model of the Avro scout in her original form with the arrow planes. It was made by Mr. S. Benington-Stoner, and is to scale, as nearly as possible being built from the drawings which appeared in "FLIGHT" in May, 1914. The model is about five inches long with the span proportionate. In sending this photo., Mr. Benington-Stoner says:—

"The greatest error is perhaps in the dihedral on the lower plane; this was owing to a miscalculation of the distance between the upper plane at the centre and under the fuselage. The only movable parts are the rudder, wheels and propeller, since the materials consisted of nothing but piano wire, wood, tin, 'tinol,' and the two wheels of brass.

"The latter, together with the rest of the rear part of the fuselage, were enamelled battleship grey. The front of the fuselage was enamelled black, i.e., the bulges containing the engine, the central struts, chassis members, and shock absorbers. The pilot's seat, which is partly shown in the smaller photo., was bored out with an electric drill, with the seat painted aluminium and the interior black.

"The 'covered in' outer struts were of tin, doubled round and soldered up, of stream-line form, and these were connected with the upper and lower planes by passing through slits, and when split open again, flattened and soldered. The roughness was filed off before enamelling."



TWO SCALE MODELS.—On the left a B.E. made by Mr. G. Stuart-Bell, and on the right an Avro scout made by Mr. S. Benington-Stoner. Further reference is made to these models above.

The W.O. Zeppelin Range-Finder.

MR. TENNANT, answering a question put in the House of Commons by Mr. Lynch, said that the War Office had in working order an efficient range-finder for Zeppelins.

More Aeroplanes from India.

A MESSAGE from Delhi on the 14th inst. stated that the subscription in the Punjab to provide seven aeroplanes named after the big rivers in the province is making excellent progress. All the districts of Northern India are subscribing freely to the funds.

The fleet will be primarily utilised in areas where Indian troops are engaged. The Maharajahs of Nabha and Jind and the Rajah of Faridkot have each given an aeroplane estimated to cost £5,000 each, and the Rajkumar Hari Singh, the Commander-in-Chief of the Kashmir Army, has given £10,000 for two aeroplanes.

Casualties in the Royal Flying Corps.

ANSWERING a question in the House of Commons by Mr. Joynson-Hicks as to the casualties of the Royal Flying Corps for the three months ending December 1st, and for the three months ending September 1st, Mr. Tennant, Under Secretary of State for War, said: I have assumed that the hon. gentleman wishes this information for all theatres of war and for officers only. The numbers killed, including those who have died of wounds, &c., for the period ending August 31st, are 14, and for that ending November 30th, 11. The corresponding figures for wounded were 22 and 21; for missing, 0 and 10; and for prisoners and interned, 18 and 26. I am not sure that the giving of casualties by arms is desirable, but I recognise that the Royal Flying Corps is in a special position in this connection.

Fatal Accident at Farnborough.

WHILE flying over Laffan's Plain on the 14th inst., a biplane, piloted by Capt. H. D. Dryden Smith, Durham Light Infantry and Royal Flying Corps, was seen to burst into flames. The machine dived to the ground behind Government House, and Capt. Smith was so badly burnt that he died before reaching Connaught Hospital.

A Handsome Gift by Mr. Patrick Alexander.

MR. PATRICK ALEXANDER has handed to the Headmaster of the Imperial Services College, Windsor (Mr. E. G. A. Beckwith), a cheque for £10,000 "for the training of character and the development of knowledge" among the boys of the school. The donor, known as one of the leading pioneers of aeronautics, had previously given the College an aero-laboratory, which has recently been fitted up for engineering.

U.S. Naval and Military Aviation.

IN the five years shipbuilding programme which Mr. Daniels, the Secretary of the Navy, recommends in his annual report, an expenditure for aviation of two million dollars in 1917 and one million dollars in each of the four following years is suggested.

In the annual report of Mr. Garrison, the Secretary for War, among the additional organisations which it is suggested should be raised in the next two years are four aero squadrons.

Deserting by Aeroplane.

ACCORDING to the *Echo Belge*, two German deserters last week arrived at Aardenburg in an aeroplane. They were a lieutenant and a private. The aeroplane passed over the frontier at a height of ten metres (about thirty feet). Both men were sent to Flushing later to be interned.

More Zeppelins Reported Destroyed.

THE Danish newspaper *Kolding Avis* on the 15th inst. published a report from Husum, Western Schleswig-Holstein, to the effect that Zeppelin "L22" was destroyed about a fortnight ago by the accidental explosion of a bomb as the airship was leaving her shed. It is stated that the crew, numbering about forty, were nearly all killed or wounded, and the huge shed partly demolished. According to the report "L22" had only been a few weeks in use. She was described as a sister ship of the "Z18," which recently exploded at Tondern, and as being of the Super-Zeppelin type, with all the recent latest improvements, including platforms on the top of the envelope for the machine and anti-aircraft guns, invisible gondolas and detachable rafts for floating purposes, in case of accidents in crossing the sea.

It was reported from Amsterdam on the 17th inst. that travellers from Brussels arriving at Roosendaal stated that a Zeppelin exploded on the previous Wednesday near Namur, all the crew being killed. The explosion is said to be due to a motor defect. The Zeppelin was travelling towards Ypres, with a heavy consignment of bombs. Three peasants working in a field near where the Zeppelin fell were arrested and taken to Germany—for fear that they would reveal the disaster.

Although it is to be hoped that all the reports of Zeppelin disasters which have filtered through neutral countries recently, are true, they should be taken with a grain of salt—the Hun is a wily bird.

Our Empire's Industrial Fair, 1917.

To erect an exhibition building which costs £200,000 and which covers an area of 610,000 square feet (three-and-half times the size of Olympia) is a splendid example of true British enterprise. This building will be known as the Palace of Industry.

Early in 1917 an exhibition will be opened in this building at Willesden Green in North-West London. It is to be known as the Industries of the Empire Fair. It will be the greatest trade exhibition ever organised, and is a worthy outcome of co-operative action on the part of the principal trade associations of this country. 1917 seems a long way ahead, but it is all too near really for so stupendous an undertaking.

Between two and three thousand exhibitors and upwards of 70 distinct trades will be represented. The frontage of the stalls will approximate 12 miles in length. This fact has rendered necessary, for the convenience of the thousands of British, Colonial and foreign buyers who intend to be present, the formation of 16 different sections, each of which will be an exhibition in itself.

The Advisory Council of the Industries of the Empire Fair consists of representatives of the principal trade associations and manufacturing houses of Great Britain. It may be explained that one object of this wonderful display of British goods (it is solely a British Exhibition, no foreign exhibits whatever being allowed) is to put an impregnable barrier between this country and the traders of Germany, who whilst the war is in progress are hoarding great stocks of goods in the hope of dumping them down in this and in neutral markets directly peace is declared.

The administrative offices are at Lincoln House, High Holborn, London, W.C., and it is interesting to know that the scheme provides for the profits of the Exhibition being refunded to the exhibitors in the form of a bonus. The Fair will, therefore, be in no way a private enterprise.



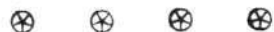
COMPANY DOINGS.

Frederick Sage and Co., Ltd.

THE report for the year ended September 30th last of Frederick Sage and Co., Ltd., states that, after making provision for depreciation and bad and doubtful debts, the net profit is £15,696. Adding to this £3,519 brought forward, a total of £19,215 is available for distribution. The directors recommend a payment of 6 per cent. dividend, less income tax, on preference shares, £8,373; a payment of 6 per cent. dividend, less income tax, on ordinary shares, £4,200; and carry forward £5,712.

NEW COMPANY REGISTERED.

Keeton and Skinner, Ltd.—Capital £5,000, in £1 shares. Acquiring business of engineers and machinists carried on by R. E. Keeton and J. E. Skinner at the Attercliffe Engineering Works, Attercliffe Road, Sheffield, as Keeton and Skinner. Smiths, Government contractors, manufacturers of munitions of war and aircraft of all kinds, &c. First directors, P. Keeton, R. E. Keeton, and J. E. Skinner.



Aeronautical Patents Published.

Applied for in 1914.

Published December 23rd, 1915.

- 23,135. W. E. MUNTZ. Guns for use against aircraft.
- 23,313. N. LACROTTE. Device for protecting soldiers, aviators and automobilists from bullets, bayonets, &c.
- 23,679. E. R. CALTHROP. Balloons.

Applied for in 1915.

Published December 23rd, 1915.

- 9,287. OESTERR. DAIMLER-MOTOREN-AKT.-GES. Mounting of propellers.

FLIGHT.

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